RUMSEY & CO., LIMITED,

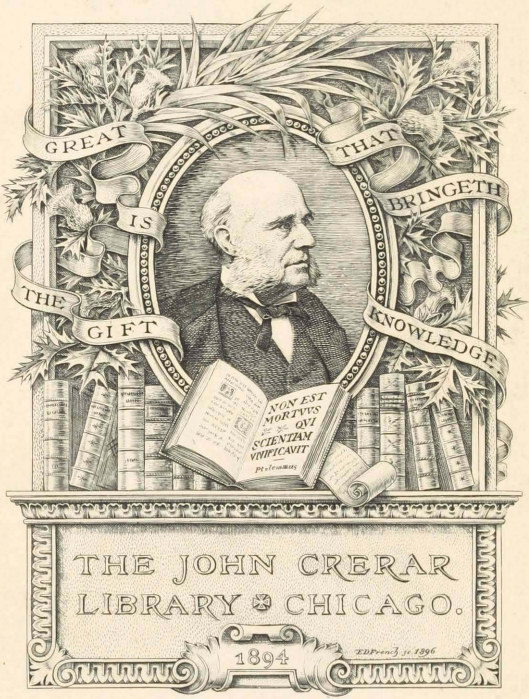
SENECA FALLS, N. Y., U. S. A.

GENERAL CATALOGUE

OF

PUMPS AND Hydraulic Apparatus

50th Edition.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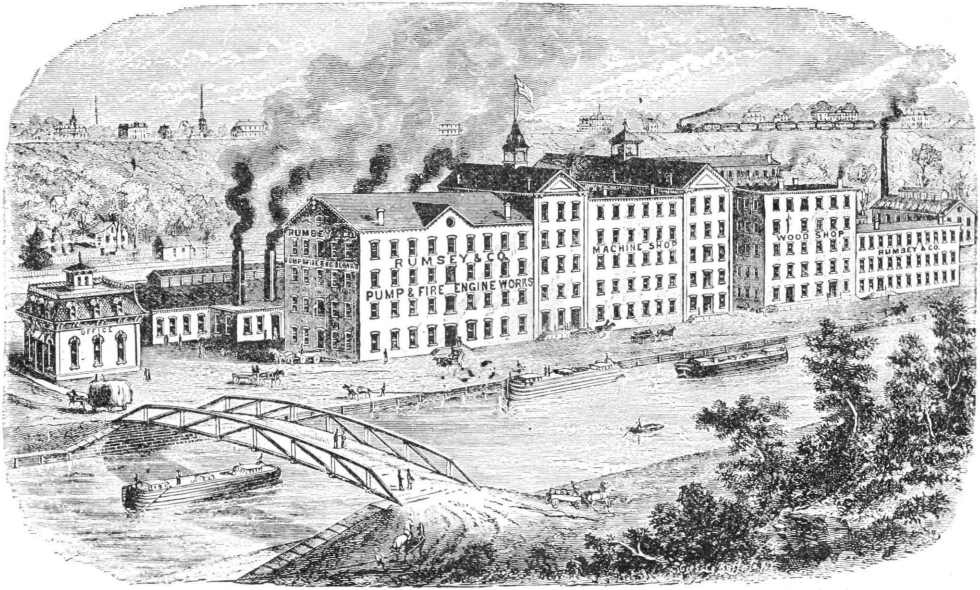
RUMSEY & CO.
PUMP & FIRE ENGINE WORKS
MACHINE SHOP
WOOD SHOP
RUMSEY & CO.

Fiftieth Edition.

ILLUSTRATED CATALOGUE

—OF—

HAND AND POWER PUMPS

Hydraulic and Pumping Machinery,

FOR ALL PURPOSES.

RUMSEY & CO., Limited,

Manufacturers and Hydraulic Engineers.

Factory and Principal Office:

SENECA FALLS, N. Y., U. S. A.

Warerooms, 35 Dey Street, New York City.

1897.

Cable Address, - - - - *PUMPS, NEW YORK.*

HENRY R. MICKS, President. L. RUMSEY SANFORD, Secretary. A. G. MERCER, Treasurer.

Established 1840.

Cable Address "Pumps, New York."

Office of RUMSEY & CO., Limited,

Seneca Falls, N. Y., U. S. A.

APRIL 1, 1897.

We take pleasure in presenting to the trade the fiftieth edition of our General Catalogue, and desire to call attention to many valuable additions and improvements in several lines of our manufacture.

Our Pumps are well known in every part of this and all civilized lands, and their reputation for superiority is so universally attested by the constantly increasing demand for them, that we deem no further guarantee necessary, but will merely say that they are warranted in every particular, and in case our goods do not give satisfaction, after a fair trial, we will take them back and refund the pay.

In this edition we have included many useful tables and formulæ which will, we trust, commend themselves to our customers. We have also endeavored to give for each style and size of our pumps, besides the diameter of cylinder and length of stroke, the approximate capacity per revolution, thus saving much computation.

A Telegraphic Cipher Code has been included in this volume. Every article manufactured by us is given a "Cipher" word or name, appended to the PRICE LIST, which, in connection with the "Cipher Code," will enable customers to place telegraphic orders with the use of but few words, avoiding the expense of lengthy telegrams.

We have endeavored to make our List of Repair Parts as complete as possible, embracing the full line of our manufactures.

In conclusion, we will say that it will be our constant effort to maintain in the future our past and present reputation for precision and promptness in the execution of all orders, and we trust that our experience and personal supervision of our business will be a sufficient guarantee for the continued confidence of our customers and the trade generally.

Very respectfully,

RUMSEY & CO., Limited.

Fire Apparatus.

Our business in this line has grown to such proportions that we would be unable to illustrate or describe in a catalogue of these dimensions the variety and sizes of Hose Carts, Hose Carriages, Hose Wagons, Hook and Ladder trucks, etc.

We will soon issue a large catalogue dealing exclusively with fire apparatus.

We should be pleased to correspond with any of our customers or the public generally, in regard to our apparatus, or will send a representative to any point in the United States and Canada, to advise on equipment for fire departments. We have

Agencies and Branch Warehouses
in the following cities:

New York, N. Y., St. Louis, Mo.,
Boston, Mass., Philadelphia, Pa.,
Chicago, Ill., Pittsburgh, Pa.
San Francisco, Cal.

Export Trade.

All parts of our pumps are perfectly made, and, being interchangeable, are easily mounted without filing or fitting. This is a most important requisite in sending goods abroad. Our large experience in the export trade insures the most perfect preparation for shipment of all foreign orders. Our Descriptive Catalogue and Export Price List will be sent free, upon application, to any part of the world.

Special Notice.

The great variety of pumps and other goods manufactured by us has rendered necessary a system of designating them, by figures placed directly over the cut of each article, and the various sizes of each figure by numbers. Therefore, in sending orders, merely give the figure, and also the number of pump, with caliber of cylinder, and much written description will be avoided. Also state if pump is to be fitted for lead or iron pipe.

As we publish many editions of our catalogue, always mention the year or number of edition.

This is the fiftieth edition, published in 1897.

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The Philosophy of Pumping.

OUR daily correspondence demonstrates the necessity of an explanation of the philosophy why water comes to the surface through the operation of pumping. This point is doubtless clearly understood by ninety-nine per cent. of our patrons. One per cent. may be benefitted by the perusal of the following remarks. If it proves an aid to even so small a proportion, our time and efforts will not have been wasted.

The limit of atmospheric pressure being 33 feet, water will rise from that depth if the air is wholly removed from its surface. This is simply the law of gravitation. Then the ordinary device for removing the air is the pump. As the air to be removed is in weight as the height of the column, it is plain that the same amount of work is required to displace it as to lift or force a column of water to an equal height, theoretically. Practically, the water can be lifted with less labor, because of its density and lubricating qualities. This is too often forgotten, and leads to a common error in placing pumps in wells.

It is thought if we exhaust a cylinder the air will rush upward to fill the space thus exhausted. It will, but the air leaves a space too that the immutable law of gravitation causes to press downward and produces a load or weight which is increased at every stroke of the piston in the cylinder, and which, when the pressure above and the draught below are more than equal, will cause the elastic air above to rush through any existing imperfection of the piston or cylinder to effect an equilibrium below. When this occurs it is obvious that no water will arise. A writer on the subject thus presents it: "To see why a pump will not draw water more than thirty-three feet vertically. Suppose the pump cylinder to be forty feet above the water, commence the process of pumping, the air will be pumped out of the pipe, the pressure of the atmosphere will force the water up the pipe until the pressure inside and outside is equal. It becomes equal when the water has reached that height at which the column of water weighs the same per square inch as is the pressure of the atmosphere. When this point is reached the water will be lifted no higher by atmospheric pressure, even though a perfect vacuum be maintained above it. Therefore, if it is desired to lift water further than this distance it becomes necessary to place the cylinder or working parts of the pump within the limits of atmospheric pressure."

A perfect pump does not long remain so, whether it be used or unused. So we say to avoid trouble and annoyance, when making calculations for placing a pump, trust nothing to suction, but rather place the cylinder far enough above the bottom to insure a prompt action of the valves, and near enough to the water to avoid the necessity of an absolutely perfect air-tight piston, except as the water shall make it such.

A practical rule that experience has taught is, for wells of all depths greater than fifteen feet, to place the cylinder within twelve feet of the bottom and let pipe extend, with a foot valve on the end, to within six to eight inches of the bottom.

This arrangement makes as near a perfect pumping outfit for wells

as can be made: the plunger is made close fitting at all times by the water surrounding it, and the valves act promptly, thus insuring against loss by the water running past them. Such a pump is always ready for use; if there is any water in the well no priming is necessary.

To the above we cannot refrain from cautioning our patrons against the prevailing error of using pipe that is too small.

Our catalogues all specify a size or sizes of pipes to be used with the pumps. These we mean to have understood as the minimum of size that should be used; we know of no maximum limit, except that governed by cost. Too large pipes cannot be used; *i. e.*, the work is not increased by the use of larger pipes, on the contrary, it is much diminished, because the particles of water being globular in form roll over each other with less friction than when in contact with foreign matter, and the size of the valve being the limit of the size of the moving column, the height to which it is raised plus the quantity, being the only measure of weight, it will be readily seen that the larger the pipes the less labor will be required to raise a given quantity to a stated height.

We find that both are combined in the old rule of half the diameter of the cylinder for the whole diameter of the pipe.

The friction in pipes is as the square of velocity; velocity increases as the squares of the diameters. The deduction from these rules is that the velocity of a volume of water flowing through two-inch pipe would be increased four times, if made to flow in the same time through one-inch pipe, the friction would, by the same law, be increased sixteen times. Hence, we advise the use of large pipes.

It is of the greatest importance that the pipe joints be made tight. This is more important in a suction than a lift-pump, because of the outside air pressure forcing itself through any opening, to the destruction of the vacuum that would otherwise exist.

In the lift-pump the only effect of a leak is a loss of the little water that escapes.

Whatever size or kind of pump is used, place it as near the source of supply as possible. If the situation is such that this advice cannot be fully adopted, then use as large pipes as the place and your means will allow. By straining both a little, it will be found in time that the effort was on the side of economy.

Do not try to make a small pump perform the duty of a large one by forcing it, because if you do you shorten the life of the pump without realizing a corresponding benefit.

Useful Figures and Formulæ.

1 cubic foot of water =	62.3791	lbs.
1 cubic inch of water =	.03621	lbs.
1 gallon of water =	8.338	lbs.
1 gallon of water =	231.	cubic in.
1 cubic foot of water =	7.476	gallons.
1 pound of water =	27.7	cubic in.

The above data is calculated for distilled water at 40° Fahr.

P = pressure in pounds per square inch,	P = H × .4335
H = head of water in feet,	H = P × 2.307
Pressure per square foot =	H × 62.425

To compute the horse-power necessary to elevate water to a given height, multiply the total weight of column of water in pounds by the velocity per minute in feet, and divide the product by 33,000. (An allowance of 25 per cent. should be added for friction, etc.)

To compute the capacity of pumping engines, multiply the area of the water piston, in inches, by the distance it travels, in inches, in a given time. The product divided by 231 gives the number of gallons in time named.

To find the capacity of a cylinder in gallons, multiply the area, in inches, by the length of stroke, in inches, which will give the total number of cubic inches; divide this product by 231 (which is the cubical contents of a gallon in inches), and quotient is capacity in gallons.

Ordinary speed to run pumps is 100 feet of piston travel per minute.

To find quantity of water elevated in one minute, running at 100 feet of piston travel per minute, square the diameter of water cylinder and multiply by 4. Example: Capacity of a 5-inch cylinder is desired; the square of the diameter (5 inches) is 25, which, multiplied by 4 gives 100, which is gallons per minute (approximately).

To find the diameter of a pump cylinder to move a given quantity of water per minute (100 feet of piston travel being the speed), divide the number of gallons by 4, then extract the square root, which will be the required diameter in inches.

To find the velocity in feet per minute necessary to discharge a given volumn of water in a given time, multiply the number of cubic feet of water by 144, and divide the product by the area of the pipe in inches.

To find the area of a required pipe, the volume and velocity of water being given, multiply the number of cubic feet of water by 144, and divide the product by the velocity in feet per minute. The area being found, it is easy to get the diameter of pipe necessary.

Capacity of pipes: A pipe one yard long holds as many pounds of water as the square of its diameter in inches. Thus, a 6-inch pipe holds 36 pounds of water in each yard of length.

Table of Diameters and Areas of Circles.

Also Table Showing Amount of Water Discharged per Inch of Stroke of a Single-Acting Pump.

Diam. Circle or Pump Cylinder. Inches.	Area of Circle or Pump Cylinder. Square Inches.	Gallons Discharged by Stroke of One Inch.	Diam. Circle or Pump Cylinder. Inches.	Area of Circle or Pump Cylinder. Square Inches.	Gallons Discharged by Stroke of One Inch.
1	.7854	.0034	3¾	11.044	.0479
1¼	1.2271	.0053	4	12.566	.0544
1½	1.7671	.0076	4½	15.904	.0688
1¾	2.4043	.0104	5	19.635	.0850
2	3.1416	.0136	5½	23.758	.1028
2¼	3.9760	.0172	6	28.274	.1224
2½	4.9087	.0212	7	38.484	.1666
2¾	5.9395	.0257	8	50.265	.2176
3	7.0686	.0306	9	63.617	.2754
3¼	8.2957	.0359	10	78.540	.3400
3½	9.6211	.0416	12	113.098	.4896

To Obtain the Capacity of a Pump with Diameter of Cylinder given in the table, multiply the decimal given in the third column by the length of stroke, in inches, for a single-acting pump, and by twice the length of stroke, in inches, for a double-acting pump; this gives the discharge in gallons per revolution.

Rules

For Determining Size and Speed of Pulleys or Gears.

The driving pulley is called the Driver, and the driven pulley the Driven.

If the number of *teeth in gears* are used instead of diameter, in these calculations, number of teeth must be substituted wherever diameter occurs.

To determine the diameter of Driver, the diameter of the Driven and its revolutions, and also revolutions of Driver being given:

$$\frac{\text{Diam. of Driven} \times \text{revolutions of Driven}}{\text{Revolutions of Driver}} = \text{Diam. of Driver.}$$

To determine the diameter of Driven, the revolutions of the Driven and diameter and revolutions of the Driver being given:

$$\frac{\text{Diam. of Driver} \times \text{revolutions of Driver}}{\text{Revolutions of Driven}} = \text{Diam. of Driven.}$$

To determine the revolutions of the Driver, the diameter and revolutions of the Driven and diameter of the Driver being given:

$$\frac{\text{Diam. of Driven} \times \text{revolutions of Driven}}{\text{Diameter of Driver}} = \text{Rev. of Driver.}$$

To determine the revolutions of the Driven, the diameter and revolutions of the Driver and diameter of the Driven being given:

$$\frac{\text{Diam. of Driver} \times \text{revolutions of Driver}}{\text{Diameter of Driven}} = \text{Rev. of Driven.}$$

Water Required for Steam Power.

The standard, as fixed by Watt, for determining the horse-power of boilers, was one cubic foot of water, evaporated per hour from 212 degrees for each horse-power. This at that time was the requirement of the best engines in use.

At the present time Prof. Thurston estimates that the water required per hour per horse-power, in good engines, is equal to the constant 200 divided by the square root of the pressure, and that in the best engines this constant is as low as 150. This would give for good engines, working with 64 pounds per square inch steam pressure, an evaporation of 25 pounds of water, and for the best engines working with 100 pounds pressure, only 15 pounds water per hour per horse-power.

The standard, therefore, adopted by the judges of the late Centennial Exposition at Philadelphia of 30 pounds water per hour, evaporated at 70 pounds pressure from 100 degrees for each horse-power, is a fair one for both boilers and engines.

Economy of Geared Boiler Feed Pump, and Heater.

D. S. Jacobus, M. E., from experiments made by himself, calculates that the saving of fuel obtained by feeding boiler by geared pump, run from the engine, feeding water through a heater in which it is heated from 60 degrees to 200 degrees, is 13.2 per cent. over a direct-acting pump, feeding water at 60 degrees without heater.

The saving by direct-acting pump and heater is 12.1 per cent.

The saving by injector and heater is 6.2 per cent.

The saving by injector without heater is 1.5 per cent.

Directions for Ordering Well or Wind-Mill Pumps,

Fitted up ready to place in the well. We should know the distance from the surface of the ground (or platform for the pump) to the bottom of the well, also the average depth of water in the well during the year. If it is a drilled well the diameter of pipe or casing should be known.

Large sizes of suction and discharge pipe are desirable, because the friction of the water in the pipes being reduced the pump will work easier.

When necessary for a well pump cylinder to be placed above the water (as well as in the case of pumps with cylinder in the stock) it is advisable to place a foot-valve and strainer on the end of the suction pipe. This will keep the pump primed and always in order for immediate use.

The following table will assist in selecting the proper size of cylinder, and sizes of suction and discharge pipe for cylinders for well or wind-mill pumps, used in wells of various depths:

Approximate Sizes of Cylinders for Wells of Various Depths.
(For Hand and Wind-Mill Pumps.)

Diameter of cylinder in inches (this size or less), ...	4	3½	3	2½	2¼	2
Diameter of suction and discharge pipe (this size or greater), ...	2	1½	1¼	1¼	1¼	1
Depth of well in feet (this depth or less),	25	50	75	100	150	200

Telegraph Cipher Code.

In this edition of our Catalogue we have endeavored to give our customers the best facilities for ordering our goods, and to that end we append a Cipher Code, which we trust will be found useful.

Every article manufactured by us, besides being designated by a *Figure* and *Number*, is given a Cipher word or name by which it may be ordered by telegraph. This in connection with the Cipher Code will save considerable expense in telegraphic correspondence.

DIRECTIONS FOR USING THE CIPHER CODE.

Write plainly; begin each Cipher Word with a capital letter; cross all t's and dot all i's. Where a blank space (.....) occurs in a sentence (of the Code), the word to supply the blank space should follow the Cipher word expressing such sentence, and if more than one blank space occurs, the supplying words should follow in their order after the Cipher Word.

Our Cable Address is "PUMPS," NEW YORK.

Cipher Code.

STOCK.

WABBLE . .	Have you in stock?
WADDING .	How soon could you furnish?
WADDLER .	Can you ship at once?
WADHOOK .	How soon could you ship if ordered at once?
WADSET . .	We have in stock.
WAFER . .	We could ship at once.
WAFFLE . .	We can ship.....at once, balance.....
WAFTED . .	We have none in stock.
WAFTING .	We have none in stock, but could furnish in.....days.
WAGER . .	We have no...in stock, but will ship other goods promptly.

ORDERS AND SHIPMENTS.

WAGERED .	Can you ship?
WAGGEL . .	When can you ship?
WAGGISH .	Have you shipped?
WAGNER .	When will you ship?
WAGON . .	When will you ship our order of.....?
WAGONER .	Advise us by telegraph when you can ship our order.
WAGONETTE	Have you shipped our order of.....?
WAGTAIL .	How soon can you complete our order of.....?
WAIL . . .	Enter our order for.....specifications follow by mail.
WAILER . .	Do not ship our order of..... until further advised.
WAINHOUSE	If you can ship at once, advise by telegraph.
WAINROPE .	Ship what you have in stock, balance soon as possible.
WAINSCOT .	Ship when you can fill the order complete.
WAINWRIGHT	Ship immediately by freight.
WAISTBAND .	Ship immediately by express.
WAISTCLOTH	Ship soon as possible, cheapest way.
WAITER . .	Ship by rail.
WAITETH .	Ship by river.
WAIVING .	Ship by steamer.
WAKEFUL .	Ship by sailing vessel.
WAKEMAN .	Ship by fast freight.
WAKENED .	Ship by cheapest route.
WALGRAVE .	Ship by quickest route.
WALKABLE .	Ship by rail to.....via cheapest route.
WALLCRESS .	Ship by rail to.....via quickest route.
WALLERITE .	Ship by rail to Buffalo via .....route.

ORDERS AND SHIPMENTS—Continued.

WALLFRUIT . Ship from New York via.....
WALLKNOT . Ship from Chicago via.....
WALLMOSS . Ship from Boston via.....
WALLOWER . Ship from Philadelphia via.....
WALLPAPER Ship from Baltimore via.....
WALLPIECE . Ship from New Orleans via.....
WALNUT . . Ship via.....
WALRUS . . Ship by steamer via Liverpool.
WALTZER . Ship by.....via.....
WAMPUM . Ship by steamer to.....via.....
WANDERER . Ship by rail to.....obtaining lowest through rate.
WANNESS . Our order of.....not yet received. Send tracer.
WANTON . . In shipping give preference to order of.....
WANTWIT . Have you shipped us any.... on our order of.....?
WAPITI . . We are in need of.....on order of....., when will you ship.
WARBLER . What is lowest freight rate to.....?
WARBLING . Make lowest contract of frieght to destination.
WARCRY . . Insure goods on order of..... at actual value.
WARDANCE . Insure goods on order of.....at 10 per cent. above value.
WARDEN . . We will ship.
WAREHOUSE We will make a shipment.
WARFARE . We will ship your order.
WARHORSE . We will complete your order of.....in about.....
WARLIKE . We could probably ship.
WARMEST . We cannot ship for a week or two.
WARMLY . We have shipped your order of.....
WARMNESS . Your telegram was received after goods had been shipped.
WARMTH . We have entered your order of.....will ship soon as possible.
WARNING . Please send shipping instructions.
WARRANT . Rate of freight to.....is.....
WARRIOR . We cannot obtain through rate of freight to.....
WAVE . . To-day or to-morrow.
WAVERING . In a few days.
WAXEND . . The middle of this week.
WAYBILL . The last of this week.
WAYLAID . In about a week.
WAYWARD . The first of next week.
WEAKEN . . The middle of next week.
WEAKLING . The last of next week.
WEAKLY . . In about two weeks.
WEAKNESS . In about three weeks.
WEALTH . . In about four weeks.
WEANED . About sixty days.
WEAPON . . About ninety days.
WEARY . . Answer by telegraph at our expense.
WEASEL . . Your letter was received in time.
WEATHER . Your letter not received in time.
WEBBING . Your telegram was received in time.
WEDDED . . Your telegram was not received in time.

EXPLAINING ORDERS.

WEDGE . . Cistern Pumps.
WEDLOCK . Pitcher Spout Pumps.
WEEVIL . . Set-Length Lift Pumps.
WEHRWOLF . Set-Length Force Pumps.
WEIGHTY . Deep-Well Standards.
WELCOME . Wind-Mill Standards.
WELDING . Wind-Mill Pumps.
WELFARE . Iron Cylinders.
WELKIN . . Brass-lined Iron Cylinders.
WELLHOLE . Brass Cylinders.
WELKER . . Rotary Force Pumps.
WENCHES . Centrifugal Pumps.
WESTERN . Double-Acting Horizontal Force Pumps.
WHACKER . Triplex Pumps.
WHALE . . Boxed for Export.
WHARVES . Hydraulic Rams.
WHEELER . Corn Shellers.
WHELK . . Hydrants or Street Washers.
WHENCE . Repairs for Pumps.
WHERRIES . Fitted with Brass Valve Seats.
WHETTED . Fitted with Inside Attachments.
WHIFF . . Fitted with Metallic Valves.
WHIG . . Fitted with Hose Attachments.
WHILOM . . Fitted for Lead Pipe.
WHIMMY . Fitted for Iron Pipe.
WHIMSEY . Fitted for Iron and Lead Pipe
WHIMSICAL . With Soldering Tubes.
WHINED . With Cock on Spout.
WHIPPED . With Double Discharge Air Chamber.
WHIPSAW . With.....Feet of Hose and Discharge Nozzle.
WHIPSTAFF . Fitted for 1-in. Suction Pipe.
WHIRLBAT . " 1¼ " "
WHIRLED . " 1½ " "
WHISKER . " 2 " "
WHISKY . " 2½ " "
WHITECAP " 3 " "
WHITLOW . Fitted for 1-in. Disch'ge Pipe
WHIZZED . " 1¼ " "
WHOOPED . " 1½ " "
WHOPPER . " 2 " "
WHORLS . " 2½ " "
WICKEDLY . " 3 " "

QUOTATIONS AND TERMS.

WIDOW . . At what price can you furnish?
WIFELY . . How soon and at what price can you furnish?
WIGGED . . Give us your lowest quotation on.....
WIGWAM . Is your offer of.....still good?
WILDFIRE . Will you hold the quotation open?
WILDLY . . Will you give us the option of accepting your offer on or before.....?
WILFUL . . We quote you expecting immediate reply by telegraph.
WILLINGLY . We quote you expecting immediate reply by mail.
WILTON . . In answer to your telegram we quote.
WIMBLE . . We quote on your specifications.
WINCING . We quote you for immediate acceptance as follows.

WINDAGE . . . 5 per ct. dis. from list.
WINDBORE . . . 7½ " " "
WINDBREAK . . 10 " " "
WINDCHEST . . 12½ " " "
WINDFALLEN . . 15 " " "
WINDGALL . . . 20 " " "
WINDGUN . . . 25 " " "
WINDIEST . 20 & 10 " " "
WINDLACE . . . 30 " " "
WINDMILL . 25 & 10 " " "
WINDOW . . . 33⅓ " " "
WINDPIPE . . 35 " " "
WINDPUMP . 35 & 5 " " "
WINDRODE . . 40 " " "
WINDSAIL . 40 & 5 " " "
WINDSHAKE . . 45 " " "
WINDTIGHT 40 & 10 " " "
WINDWARD . . 50 " " "
WINEBAG . 50 & 5 " " "
WINECASK . . 55 " " "
WINECELLAR 55 & 5 " " "
WINEGLASS. 55 & 10 " " "
WINEPRESS . 60 " " "
WINGCASE . 60 & 5 " " "
WINGSHELL . . 62½ " " "
WINKETH . 60 & 7½ " " "
WINNER . . 60 & 10 " " "

WINNINGLY . . . 65 per ct. dis. from list
WINNOW . 60, 10 & 5 " " "
WINSOME . . . 66⅔ " " "
WINTER . . 65 & 5 " " "
WINTERKILL 60, 10 & 10 " " "
WINTERRIG . . . 67½ " " "
WINTRY . . 65 & 7½ " " "
WIREDRAWN . 65 & 10 " " "
WIREGAUGE . . 70 " " "
WIREHELL . 70 & 5 " " "
WISDOM . 70 & 7½ " " "
WISEACRE . 70 & 10 " " "
WISENESS . 70 & 12½ " " "
WISHBONE . 70 & 15 " " "
WISHLY . . . 75 " " "
WISTFULLY . 75 & 5 " " "
WITCHCRAFT . 75 & 10 " " "
WITHERED . We accept order at prices named.
WITHERNAM . We cannot accept order at prices named.
WITHERS . . This quotation is for immediate acceptance.
WITHIN . . We cannot hold this quotation open.
WITHSTOOD . All open quotations on Pumps are withdrawn.
WITLESS . . We cannot sell the goods at that price now: our quotation was for immediate acceptance.
WITLING . . TERMS: Cash with order.
WITNESS . . Terms: Cash on receipt of invoice.
WITTY . . . Terms: Cash on receipt of goods.
WIZARD . . Terms: Sight draft with bill lading.
WOEFULLY . Terms: 30 days net.
WOLFISH . . Terms: 60 days net.
WONDER . . Terms: 30 days, less one per cent. discount for cash in ten days.
WOODBINE . Terms: 60 days, less two per cent. discount for cash in ten days.
WOOLEN . . F. O. B. Cars. Seneca Falls.
WORKER . . F. O. B. New York.
WORSHIP . . Freight allowance.....cents per 100 lbs.

ASKING.

WORST . . Your message is unintelligible. Please repeat.
WORTHY . . Our message to you contained.....words, is that correct?
WOUND . . You have not answered our letter of.....
WRANGLE . You have not answered our telegram of.....
WRATHFUL . Please answer our letter of the.....
WRECK . . Please answer our telegram of the.....
WRENCH . . Did you receive our letter of the.....?
WRESTLE . Did you receive our telegram of the.....?
WRETCHED . Your letter was not received until.....

ELECTRIC PUMPS AND WATER WORKS PUMPS.

RABID . . At what price will you furnish, F. O. B. Seneca Falls, pump..... (use code word for pump desired), with.....electric motor belted to pump.

RADIATE . At what price will you furnish, F. O. B. Seneca Falls, pump..... with.....electric motor geared direct to pump.

RADICAL . At what price will you furnish, F. O. B. Seneca Falls, pump..... with gas or gasolene engine.....to drive by belt.

RAFT . . At what price will you furnish, F. O. B. Seneca Falls, pump..... with gas or gasolene engine.....direct connected with clutch.

RAGE . . Rawhide pinions on all gears,

Horse-power Required.	Code Word. Gas or Gasolene Engine.	Direct Current Motor.	Induction Motor.			
1	Rail	Reach	Rib	.....	.....	.....
2	Rainy	React	Ribbon	.....	.....	.....
3	Rake	Read	Rice	.....	.....	.....
5	Rally	Reading	Ride	.....	.....	.....
7	Ramble	Ready	Ridge	.....	.....	.....
10	Ramify	Real	Ridicule	.....	.....	.....
15	Rammer	Realism	Ride	.....	.....	.....
20	Ramp	Realm	Rigged	.....	.....	.....
25	Rampage	Realty	Right	.....	.....	.....
30	Rampant	Reamer	Rightful	.....	.....	.....
35	Ramrod	Reappear	Ring	.....	.....	.....
50	Rancor	Reason	Ringlet	.....	.....	.....
60	Rand	Rebel	Ripe	.....	.....	.....
70	Random	Reckon	Ripple	.....	.....	.....
100	Range	Recoil	Risen	.....	.....	.....

ROAD . . Quote price erected on foundations furnished by purchaser at.....

ROBE . . 110 volts.

ROBIN . . 220 volts.

ROBUST . 500 volts.

ROCKER . 1000 volts.

ROGUE . . 2000 volts.

ROLLER . We can furnish pump and driving motor as specified for..... .....dollars, F. O. B. Seneca Falls.

ROMANCE . We can furnish pump and driving motor as specified, erected on foundations furnished by purchaser for.....dollars.

ROOF . . Piping and wiring not included.

ROPER . . Piping and wiring included.

RUMSEY'S PUMPS.

Cistern Pumps,

Well Pumps,

Deep Well Pumps,

Wind-Mill Pumps.

Well Pump Standards,

Iron Cylinders,

Brass Cylinders,

Drive Well Points.

Iron Cistern Pump.

FIG. 101.

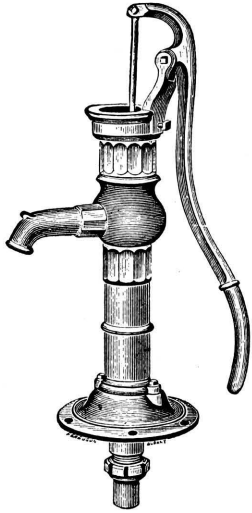


Fig. 101 represents our entirely new style Iron Cistern Pump, with brass valve seat and brass tubes projecting, for attaching lead, gas, and other pipe, as may be ordered. The fulcrum and lever revolve, and can be adjusted to any position by merely turning the set-screw under the lever. We make eight sizes, as follows:

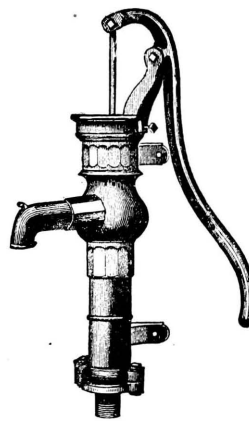
FIG. 101—Sizes and Prices.

No.	Diam. Cyl. Inches.	Fitted for Pipe. Inches.	Capacity per Stroke. Gallons.	IRON.		BRASS CYLINDER.	
				Cipher.	Price.	Cipher.	Price.
0	2	1	1-15	Abate	$3.50	.....	.....
1	2¼	1	1-12	Abaft	4.00	Aboard	$6.00
2	2⅜	1¼	1-11	Abase	4.50	Abolish	7.00
3	2½	1¼	1-10	Abbess	5.00	Abound	8.00
4	3	1½	1-6	Abbot	5.50	Abreast	10.00
5	3¼	2	1-5	Ability	6.50	Abrupt	14.00
6	3½	2	1-4	Abjectly	8.00	.....	.....
7	4	2½	1-3	Ablaze	12.00	.....	.....

New Style Revolving Fulcrum Cistern Pump.

With Brackets and Brass Valve Seats.

FIG. 102.



The above cut fully illustrates our Bracket Cistern Pump. The particular use will be readily seen, as it is especially adapted to places where a pump with a flanged base could not be used. It can be secured to the wall or a post, as found most convenient, and occupies the least possible space. In construction it combines all the meritorious features of our Fig. 101, having the revolving top, brass valve seat, bolt fastenings, and union couplings. To prevent freezing the lever is raised to its full height, which trips the valves and lets all the water out of the pump. This simple act will render *all* our pumps of this style anti-freezing.

FIG. 102—Sizes and Prices.

No.	Diam. Cyl. Inches.	Fitted for Pipe. Inches.	Capacity per Stroke. Gallons.	IRON.		BRASS CYLINDER.	
				Cipher.	Price.	Cipher.	Price.
0	2	1	1-15	Abscond	$3.50	.....	.....
1	2¼	1	1-12	Absent	4.00	Abstain	$6.00
2	2⅜	1¼	1-11	Absolve	4.50	Abstract	7.00
3	2½	1¼	1-10	Absorb	5.00	Abduct	8 00
4	3	1½	1-6	Absurd	5.50	Accession	10 00
5	3¼	2	1-5	Abuse	6.50	Abhors	14.00
6	3½	2	1-4	Abyss	8.00	.....	.....

New Style Pitcher Spout Cistern Pump.

FIG. 99.

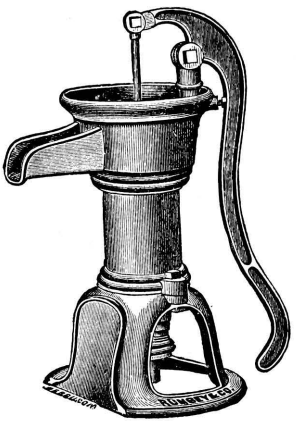


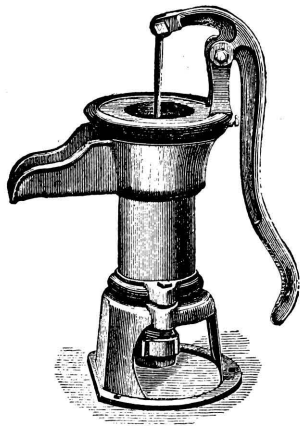
Fig. 99 illustrates our improved Pitcher Spout Cistern Pump with open top. The lever can be revolved to any desired position, for right or left hand use, by loosening set-screw. Fitted for either lead or iron pipe. Cylinders are bored and polished. Anti-freezing.

FIG. 99—Sizes and Prices.

No.	Diam. Cyl. Inches.	Fitted for Pipe. Inches.	Capacity per Stroke. Gallons.	IRON.		BRASS-LINED CYLINDER.	
				Cipher.	Price.	Cipher.	Price.
1	2½	1¼	1-10	Accede	$4.25	Accuse	$6.50
2	3	1¼	1-7	Accept	4.75	Account	7.25
3	3½	1¼	1-5	Access	5.25	Accrued	8.00
4	4	1½	1-4	Acclaim	5.75	Acetic	9.00
5	4½	1½	1-3	Accord	6.25	Ache	10 00

Close-Top, New Style Pitcher Spout Cistern Pump.

FIG. 99½.



Same as Fig. 99, except in the construction of the top, which is closed to prevent dust and other substances from entering, *the original design and invention being our own.*

Revolving top. To prevent freezing, trip valves by raising lever to its extreme height.

FIG. 99½—Sizes and Prices.

No.	Diam. Cyl. Inches.	Fitted for Pipe. Inches.	Capacity per Stroke. Gallons.	IRON.		BRASS-LINED CYLINDER.	
				Cipher.	Price.	Cipher.	Price.
1	2½	1¼	1-10	Acme	$4.25	Acre	$6.50
2	3	1¼	1-7	Aconite	4.75	Acrostic	7.25
3	3½	1¼	1-5	Acorn	5.25	Active	8.00
4	4	1½	1-4	Acquire	5.75	Actual	9.00
5	4½	1½	1-3	Acquit	6.25	Acute	10.00

Diamond Pitcher Spout Pump.

FIG. 98.

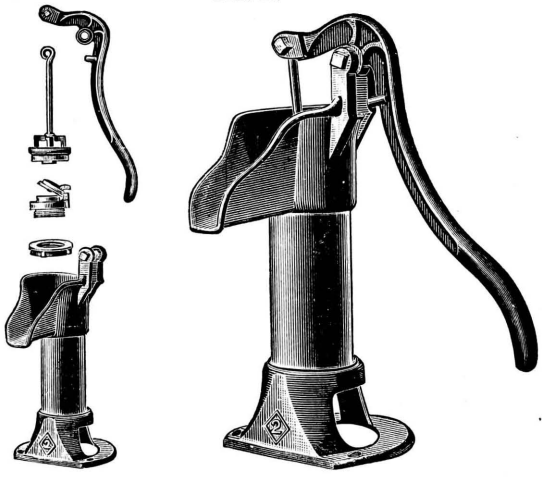
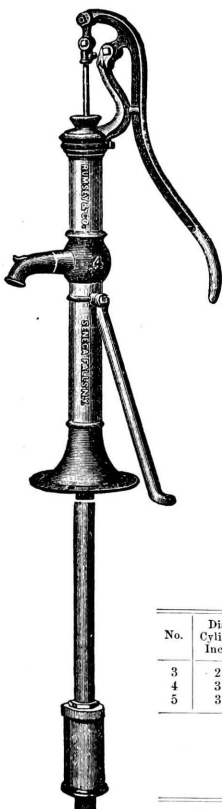


Fig. 98 is our new open top Pitcher Spout Pump. It is of the same capacity as our regular Pitcher Pump but is lighter in weight. The base, cylinder, spout, and fulcrum are all cast in one piece, making a very light and durable pump. The cut of the several parts of this pump shows the extreme simplicity of its construction, and will commend it for the ease with which it can be set up or be taken apart and put together whenever necessary. We make but one size in this style.

FIG. 98—Size and Prices.

No.	Diam. Cyl. Inches.	Fitted for Pipe. Inches.	Capacity per Stroke. Gallons.	IRON.		BRASS-LINED CYLINDER.	
				Cipher.	Price.	Cipher.	Price
2	3	1¼	1-7	Ace	$4.25	Acid	$6.50

FIG. 509.



New Style Close Top Well Pump.

Anti-Freezing Wrought-Iron Connecting Pipe.

Fig. 509 represents our New Style, Anti-freezing, Cistern and Well Pump. It is made with a wrought-iron set length, connecting into the stock just below the spout, and is fitted with a close top, which effectually prevents all foreign substances from getting into the pump. Fig. 509 is entirely new in design, being made with special reference to the trade, and we place it in the market confident that its excellent points will be appreciated.

FIG. 509—Sizes and Prices.

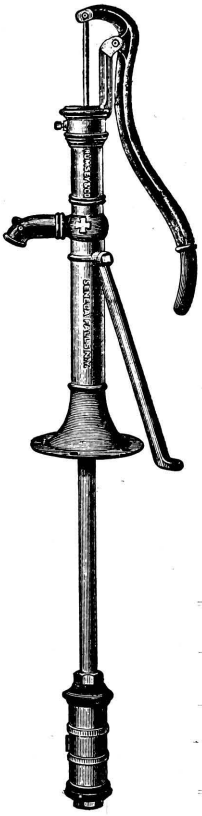
No.	Diam. Cylinder. Inches.	Suction. Inches.	Height of Stock. Inches.	Base to Spout. Inches.	Cipher.	Price.
3	2¾	1¼	33¼	19½	Adage	$8.75
4	3	1¼	35¼	21	Adapt	9.25
5	3¼	1¼	37¼	23	Adder	9.75

FIG. 509—Standard Only.

Without Cylinder or Set Length.

Number.	Cipher.	Price.
3	Addict	$4.50
4	Addition	5.00
5	Addle	5.75

FIG. 510.



New Style Anti-Freezing Cistern and Well Pump.

Fig. 510 accurately represents our New Style Anti-Freezing Cistern and Well Pump. This pump is made with a wrought-iron set length, connecting into the socket just below the spout, and in every respect, both in design and workmanship, it challenges comparison with any pump made.

FIG. 510—Sizes and Prices.

No.	Diam. Cyl. Inches.	Suction. Inches.	Cipher.	Price.
3	2¾	1¼	Address	$8.25
4	3	1¼	Adduce	8.50
5	3¼	1¼	Adequate	9.00

FIG. 510—Standard Only.

Without Cylinder or Set Length.

Number.	Cipher.	Price.
3	Adhere	$4.00
4	Adhered	4.50
5	Adherence	5.25

Large Open Top Stock Pump.

For Watering Stock.

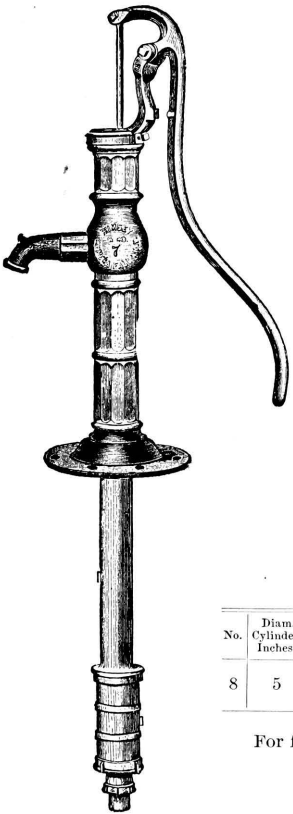


FIG. 112.

Fig. 122 is a cut of our Open Top Yard Well Pump. This is thoroughly built in every particular, and of handsome appearance. It is rendered anti-freezing without tripping the valves, they being placed below the reach of frost. The plunger can also be easily withdrawn for repairs. This pump has our patent sand valve and brass valve-seat. It is heavy, strong, and fully meets all the requirements of an excellent farm pump for watering stock, or for other purposes where a considerable quantity of water is used. Fitted for wrought-iron pipe, unless cast-iron is ordered.

FIG. 112—Size and Price.

No.	Diam. Cylinder. Inches.	Capacity per Rev. Gallons.	Suction. Inches.	Cipher.	Price.
8	5	1/3	2	Adhesive	$16.00

For foot valves see page 58.

Large Tight Top Stock Pump.

For Watering Stock.

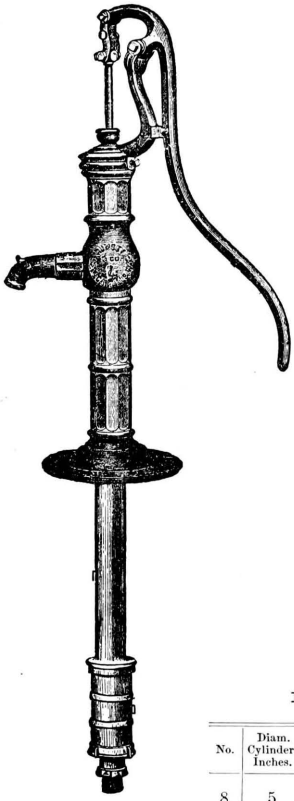


FIG. 113.

Fig. 113 represents our new Tight Top Stock Pump, made expressly for those who have large quantities of water to raise for stock and farm purposes generally, for wells not exceeding 25 feet in depth. It being plain, strong, and durable, renders it invaluable to the farmer who resorts to wells and cisterns for his supply of water. Fitted for wrought-iron pipe, unless otherwise ordered.

This pump is anti-freezing.

FIG. 113—Size and Price.

No.	Diam. Cylinder. Inches.	Capacity. per Rev. Gallons.	Suction. Inches.	Cipher.	Price.
8	5	1/3	2	Adhibit	$18.00

For foot valves see page 58.

Anti-Freezing Set Length Pumps.

With Wrought-Iron Extension (or Set Length).

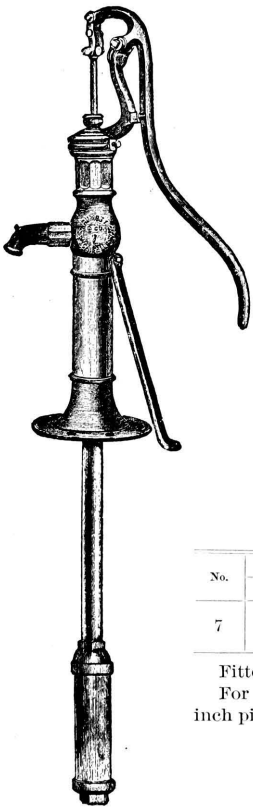


FIG. 115½.

Always say whether tight or open top pump is wanted.

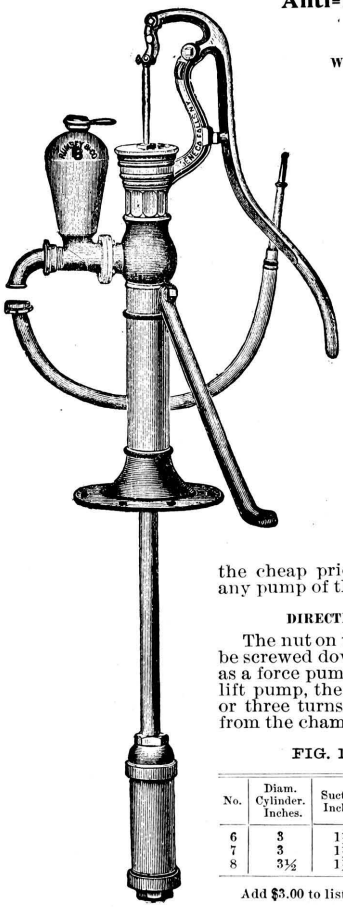
Well pump, anti-freezing, with wrought-iron extension (or set length), revolving fulcrum, and rubber buffer to relieve the concussion of the lever at the termination of its downward stroke. It is always fitted for 1½-inch pipe, unless otherwise ordered.

FIG. 115½—Size and Prices.

No.	OPEN TOP.		TIGHT TOP.	
	Cipher.	Price.	Cipher.	Price.
7	Adipic	$14.00	Adieu	$16.00

Fitted with 3½-inch cylinder.

For prices for foot valve and strainer, 1½-inch pipe, see page 58.



Anti-Freezing Engine Well Force Pump.

With Revolving Fulcrum, Brass Piston-Rod, Etc.

FIG. 115.

Fig. 115 represents our Engine Well Pump. We manufacture three sizes of this style.

It is intended for wells not exceeding 30 feet in depth, but its strength is amply sufficient for service in wells of twice that depth. It is hardly requisite to enumerate or explain the many good qualities, as the cut portrays perfectly the appearance of this pump. It will force water in any desired direction, while as an efficient engine for extinguishing fires, watering lawns, washing windows, carriages, etc., it is without an equal. It is equally serviceable as a lift well pump. Its relative size and varied utility, combined with the cheap price, renders it unrivaled by any pump of the kind in the market.

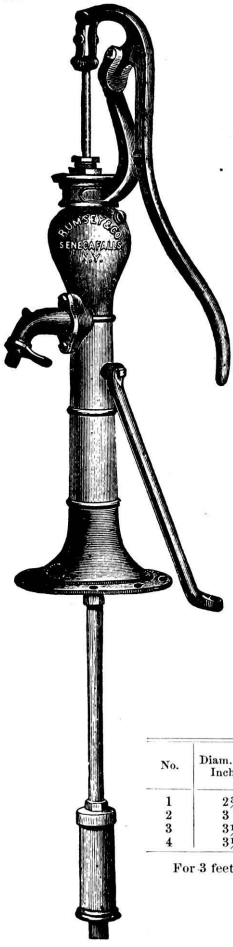
DIRECTIONS FOR MANAGEMENT.

The nut on top of the air-chamber should be screwed down perfectly tight when used as a force pump. When used as an ordinary lift pump, the nut must be unscrewed two or three turns, to permit the air to escape from the chamber.

FIG. 115—Sizes and Prices.

No.	Diam. Cylinder. Inches.	Suction. Inches.	Capacity per Rev. Gallons.	Cipher.	Price.
6	3	1¼	1-5	Adipose	$13.00
7	3	1¼	1-5	Adjacent	15.00
8	3½	1½	1-4	Adjacency	17.00

Add $3.00 to list for 3 feet of hose and discharge pipe.



Anti-Freezing Lift and Force Pumps.

With Wrought-Iron Extension Pipe.

FIG. 114½.

The annexed cut well represents our new Tube Well Force Pump, designed and constructed specially to supply a necessity long existing in the driven-well trade. There is a universal demand from all quarters for a reliable pump to fill such a vacancy, at once combining strength, symmetry, utility, and *cheapness*, and from our numerous testimonials and orders for this particular pump, we know that it entirely fulfills all these requirements, and stands peerless amongst all others of its class. Like all our force well pumps, it has a *brass* rod, which does not corrode and tear out the packing, so that the bad leakage at the stuffing-box, so common to this class of pumps, is effectually avoided. The stock and air-chamber are made in one piece, with a tube extending downward through the latter, at once preventing the escape of air from the chamber and providing the best possible guide for the piston-rod below the brass stuffing-box in the cap. Hose can readily be connected to the spout by means of an attachment provided (gratuitously) for this purpose. It is made anti-freezing in the same manner as all of our extension pumps, the cylinder being placed three feet below the surface of the ground or platform, and having a vent-hole drilled at or near the top of the cylinder, allowing the escape of all water from the stock and connecting pipe after pumping.

These pumps are arranged for wells not exceeding 30 feet in depth, but by inexpensive auxiliaries are often used where the well is of 50 feet, or greater, depth.

DIRECTIONS.

When used as a force pump, the thumb-screw in air-chamber should be screwed tight. Take out the screw when used as an ordinary lift pump.

FIG. 114½—Sizes and Prices.

No.	Diam. Cyl. Inches.	Suction Inches.	Capacity per Rev. Gallons.	Cipher.	Price.
1	2¾	1¼	1–6	Adit	$13.00
2	3	1¼	1–5	Adjourn	13.50
3	3¼	1¼	1–4	Adjudge	14.00
4	3½	1½	1–3	Adjunct	14.50

For 3 feet hose and discharge pipe, add $3.00 to list price.

Special Force Pump Standard.

FIG. 364.

The accompanying cut well represents our new Tube Well Force Pump, designed and constructed specially to supply a necessity long existing in the drive-well trade. There is a universal demand from all quarters for a reliable pump to fill such a vacancy, at once combining strength, symmetry, utility, and *cheapness;* and from our numerous testimonials and orders for this particular pump, we know that it entirely fulfills all these requirements, and stands peerless amongst all others of its class. Like all our force well pumps, it has a *brass* rod, which does not corrode and tear out the packing, so that the bad leakage at the stuffing-box, so common to this class of pumps, is effectually avoided. The stock and air-chamber are made in one piece, with a tube extending downward through the latter, at once preventing the escape of air from the chamber and providing the best possible guide for the piston-rod below the brass stuffing-box in the cap. Hose can readily be connected to the spout by means of an attachment provided (gratuitously) for this purpose.

FIG. 364—Size and Price.

Standard, for 1¼-inch Pipe (Adjutant), ... $10.00

For 3 feet hose and discharge pipe, add to list $3.00.
For cylinders to go with this Standard, see pages 54 and 55.
Above prices do not include cylinder.
When arranged with cock on spout, add to list $2.50.

Rumsey's Patent Engine Well Pump.

Standard for Deep Wells.

FIG. 118.

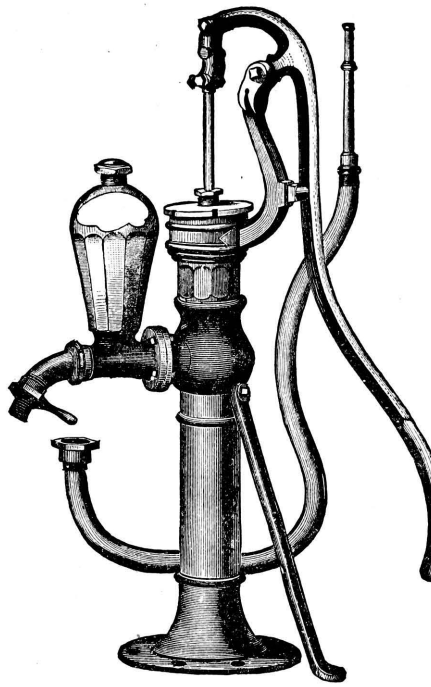


FIG. 118—Sizes and Prices.

No.	Suction Pipe. Inches.	Cipher.	Price.
6	1¼	Admire	$10 00
7	1½	Admired	11.00
8	1½ or 2	Admiral	13.00

With 3 feet of hose and discharge pipe, add to list $3.00.
For cylinders to go with this Standard, see pages 54 and 55.
Above prices do not include cylinders.

Rumsey's Patent Engine Well Pump.

Arranged with Brakes for Wood Levers.

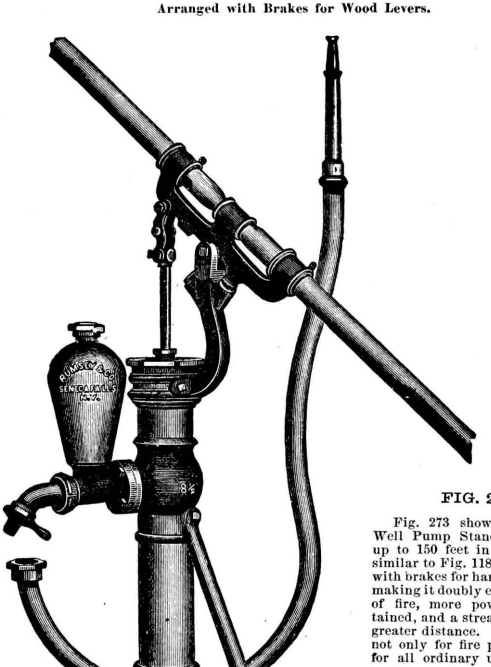


FIG. 273.

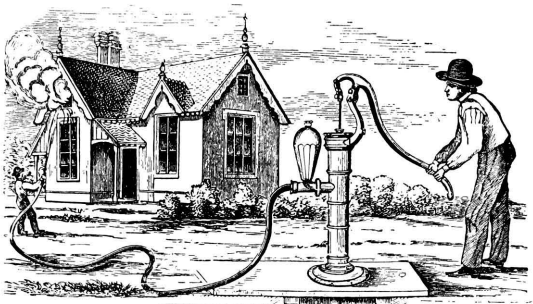
Fig. 273 shows our Engine Well Pump Standard for wells up to 150 feet in depth. It is similar to Fig. 118, but arranged with brakes for hard-wood levers, making it doubly effective in case of fire, more power being obtained, and a stream thrown to a greater distance. It is adapted not only for fire protection, but for all ordinary uses of a well pump.

DIRECTIONS.

When used as a common pump, the nut on the top of air-chamber should be unscrewed two or three turns; when used with hose, the nut should be screwed down perfectly tight.

FIG. 273—Size and Price.

Fig. 273, Standard only, 1¼ or 2-inch pipe (Admit), ... $15.00
For 3 feet of hose and discharge pipe, add to list $3.00
For cylinders to go with this Standard, see pages 54 and 55.
Above prices do not include cylinders.



Engine Well Pump.

For Well from 10 to 150 Feet Deep.

FIG. 355.

Parties ordering pumps should give exact depth of well, also depth of water usually in well.

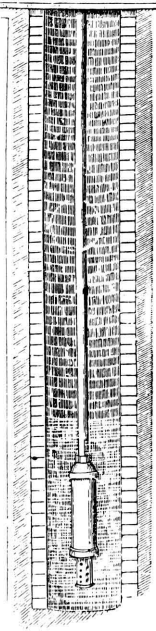
DIRECTIONS.

When used as a common pump, the nut on top of air-chamber should be unscrewed two or three turns; when used with the hose, it should be screwed down perfectly tight.

Warranted to give good satisfaction. Also, not affected by frost in the coldest climate, provided the well or cistern is properly covered up.

The above cut represents our Engine Well Pump, for cisterns or wells. It is adapted not only to the ordinary uses of a well pump, but also to the washing of windows, buildings, vehicles, and the extinguishing of fires. Having an air-chamber, it combines all the principles of a double-acting fire engine. With three feet of hose and a discharge pipe, water can be thrown over a two-story building, and with sufficient hose, can be carried over the entire premises. This we deem one of the most practical and useful improvements of the day, since every house in town or country may have not only the convenience of a good well pump, but at the same time be always supplied with a first-class fire engine.

This pump should be used with our unequaled cylinder and foot valve, Fig. 126.



This cut shows our Fig. 118 No. 8 Pump, with cylinder, set in a well and in operation.

For prices of this pump, see page 29.

Improved Sectional Deep Well Force Pump Standard

For Wells up to 150 Feet Deep.

FIG. 308.

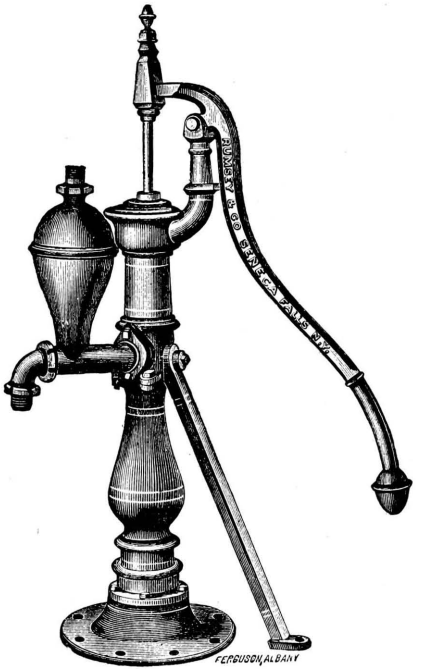


Fig. 308 is similar in construction to Fig. 299, the difference being the addition of the stuffing-box and air-chamber necessary to a force pump. It will be found one of the best Deep Well Force Pumps in use, and as such we fully guarantee it.

FIG. 308—Sizes and Prices.

Standard complete, fitted for 1¼, 1½, 2, or 2½-in. pipe, as ordered (Admix), . .	$13.00
Extra Flanges for 1¼-inch pipe, each, ...	.50
Extra Flanges for 1½, 2, or 2½-inch pipe, each, ...	.60

For cylinders to go with this Standard, see page 54.

Prices above do not include cylinders.

Improved Sectional Deep Well Standard.

FIG. 299.

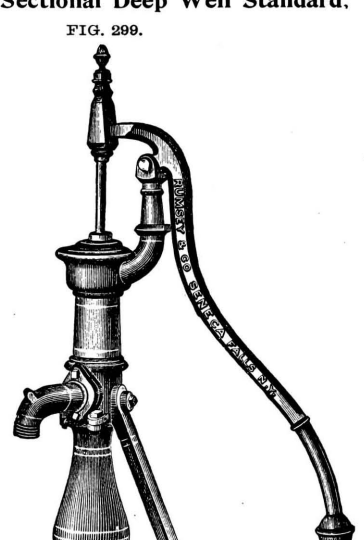


Fig. 299 represents a pump which requires little explanation. In has been well known and deservedly popular in deep well locations for many years, and we think should continue to command the favorable consideration it has received in the past. It has a long, well-balanced ball lever, strong brace, ¾-inch turned and polished rod, and can be relied on to work easily in wells from 100 to 150 feet deep.

FIG. 299—Sizes and Prices.

Standard complete, fitted for 1¼, 1½, 2, or 2½-in. pipe, as ordered (Admove), . . $10.00
Extra Flanges for 1¼-inch pipe, each, ...50
Extra Flanges for 1½, 2, or 2½-inch pipe, each, ...60

For cylinders to go with this Standard, see pages 54 and 55.
Prices do not include cylinders.

Patent Tight Top Standard.

With Two Braces.

FIG. 122.

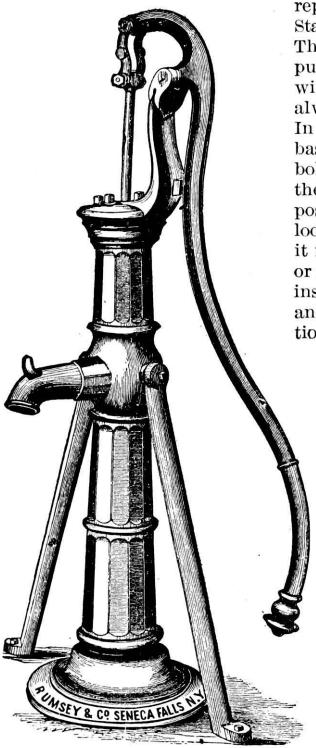


Fig. 122, No. 29, is an accurate representation of our Tight Top Standard Artesian Well Pump. This is a *very* strong and compact pump, well calculated to sustain, without injury, the hard usage always received by a street pump. In addition to an unusually large base, are two strong *braces*, which, bolted firmly to the platform of the well, effectually prevent all possibility of the pump working loose by the hardest test to which it may be subjected. The bearer or fulcrum is connected to a ring, inside of the stock, by three bolts, and revolves to any desired position. It is also provided with a rubber buffer, which obviates the concussion at the close of each stroke, and absolutely prevents the breakage of the lever by any carelessness. Nothing injurious to the working of the valves can by any possibility get into this pump. We recommend this pump as permanent and suitable for any depth of well of less than 200 feet, and guarantee good satisfaction in its use.

FIG. 122 Standard Complete.

As shown in cut.

Threaded for 1¼-inch pipe (Admirable) . . Price, $16.00

Threaded for 2-inch pipe (Admiralty) . . Price, $16.00

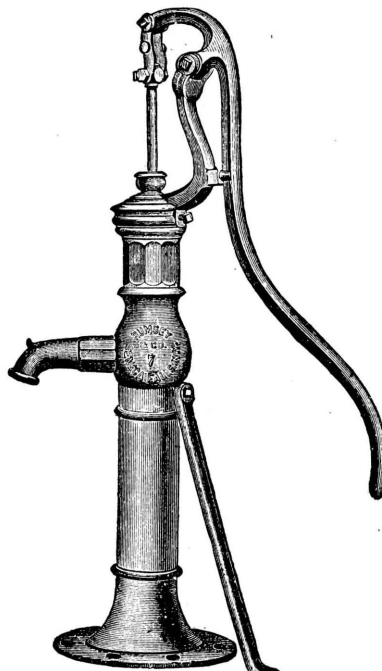
These prices do not include cylinder.

For cylinders to go with this Standard, see pages 54 and 55.

Patent Tight Top Standard.

For Wells up to 100 Feet in Depth.

FIG. 120.



This pump is cut for wrought-iron pipe in the stock near the spout, and is less liable to burst by freezing; in fact, it is an impossibility for it to be injured through this cause, as no water is contained in the stock. In ordering this pump always mention the internal diameter of pipe for which it is to be cut, as we can arrange for any desired size; also state the kind of rods intended to be used, as we make the stubs either to weld to connecting-rods, or to screw with rod couplings.

Fig. 120, Standard complete, as per cut, 1¼-inch pipe (Adorably), ... $10.00

For cylinders to go with this Standard, see pages 54 and 55.
Price does not include cylinder.

"Eagle" Wind-Mill Force Pump Standard.

FIG. 68. With Brace.

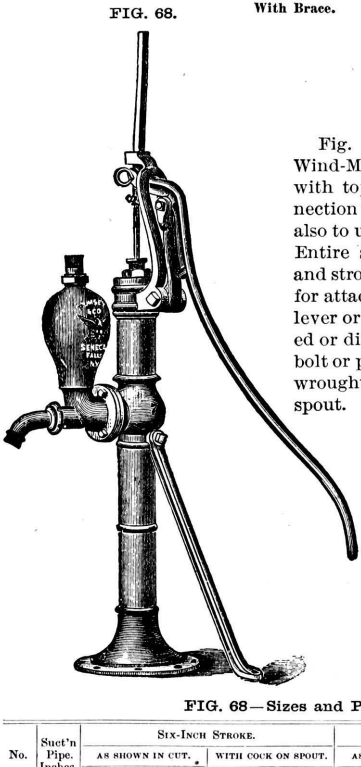


Fig. 68 shows our new style Wind-Mill Force Pump Standard, with top arranged to make connection with wind-mill power, and also to use by hand when desired. Entire standard is made heavy and strong. The spout is arranged for attaching hose if desired. The lever or handle is readily connected or disconnected by means of a bolt or pin. Tapped to receive the wrought-iron pipe just below the spout.

FIG. 68—Sizes and Prices.

No.	Suct'n Pipe. Inches.	Six-Inch Stroke. As shown in cut.		Six-Inch Stroke. With cock on spout.		Ten-Inch Stroke. As shown in cut.		Ten-Inch Stroke. With cock on spout.	
		Cipher.	Price.	Cipher.	Price.	Cipher.	Price.	Cipher.	Price.
6½	1¼	Adore	$12.00	Adroit	$14.50	Adverb	$13.50	Advice	$16.00
7½	1¼	Adorn	13.00	Adult	15.50	Adverse	14.50	Adze	17.00
8½	1½	Adrift	15.00	Advent	18.00	Advert	16.50	Aegis	19.50

Prices do not include cylinders.
For cylinders to go with this Standard, see pages 54 and 55.

Wind-Mill Force Pump Standard.

For Deep Wells.

FIG. 286.

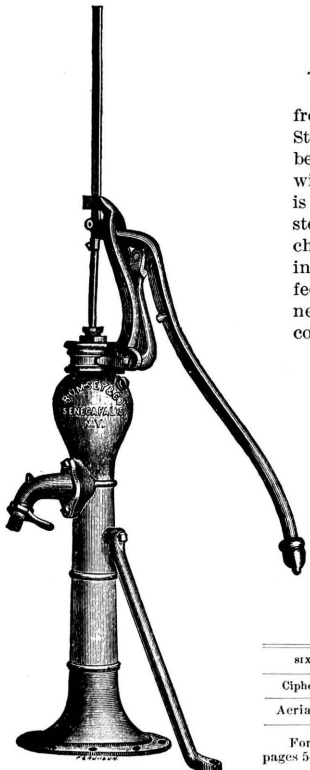


Fig. 286 represents our Anti-freezing Engine Well Force Pump Standard, in an improved form, being especially adapted for use with wind-mills. The air-chamber is combined with the standard instead of being placed on the discharge. This pump can be used in wells of any depth up to 200 feet. Hose can be easily connected, and the pump readily converted into a very efficient fire engine, or adapted to any of the many uses for which a first-class force pump is usually designed. We tap it to receive the gas pipe just below the spout.

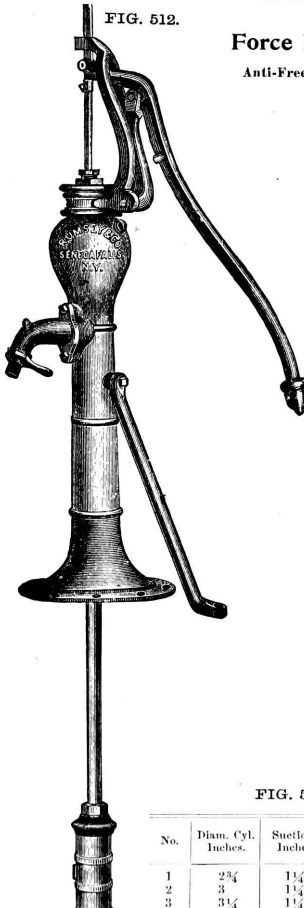
FIG. 286—Sizes and Prices.

SIX-INCH STROKE.		TEN-INCH STROKE.	
Cipher.	Price.	Cipher.	Price.
Aerial	$11.00	Aerolite	$12.50

For cylinders to go with this Standard, see pages 54 and 55.

Above prices do not include cylinders.

FIG. 512.



Force Pump, Wind-Mill Top.

Anti-Freezing, with Wrought-Iron Extension (or Set Length).

The annexed cut well represents our new Tube Well Force Pump, designed and constructed specially to supply a necessity long existing in the driven-well trade. There is a universal demand from all quarters for a reliable pump to fill such a vacancy, at once combining strength, symmetry, utility, and *cheapness*, and from our numerous testimonials and orders for this particular pump, we know that it entirely fulfills all these requirements, and stands peerless among all others of its class. Like all our force well pumps, it has a *brass* rod, which does not corrode and tear out the packing, so that the bad leakage at the stuffing-box, so common to this class of pumps, is effectually avoided. The stock and air-chamber are made in one piece, with a tube extending downward through the latter, at once preventing the escape of air from the chamber and providing the best possible guide for the piston-rod below the brass stuffing-box in the cap. Hose can readily be connected to the spout by means of an attachment provided (gratuitously) for this purpose. It is made anti-freezing in the same manner as all of our extension pumps, the cylinder being placed three feet below the surface of the ground or platform, and having a vent hole drilled at or near the top of the cylinder, allowing the escape of all water from the stock and connecting pipe after pumping.

These pumps are arranged for wells not exceeding 30 feet in depth, but by inexpensive auxiliaries are often used where the well is of 50 feet, or greater, depth. Stroke 6 inches.

DIRECTIONS.

When used as a force pump, the thumb screw in air-chamber should be screwed tight. Take out the screw when used as an ordinary lift pump.

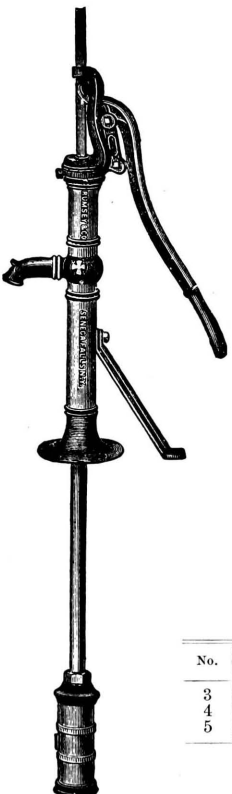
FIG. 512—Sizes and Prices.

No.	Diam. Cyl. Inches.	Suction. Inches.	Capacity per Rev. Gallons.	Cipher.	Price.
1	2¾	1¼	1–7	Aeronaut	$14.25
2	3	1¼	1–6	Aerostat	14.50
3	3¼	1¼	1–5	Affair	15.00
4	3½	1½	1–4	Affect	16.00

Maltese Cross Well Pump.

Wind-Mill Top, Wrought-Iron Connecting Pipe, Anti-Freezing.

FIG. 507.



This cut represents the same standard as Fig. 506, but with the addition of a wrought-iron connecting pipe and cylinder. Stroke, eight inches.

FIG. 507—Sizes and Prices.

No.	Suction Inches.	Diam. Cyl. Inches.	Cipher.	Price.
3	1¼	2¾	Affiance	$ 9.00
4	1¼	3	Affirm	9.50
5	1¼	3¼	Affix	10.00

Special Maltese Cross Wind-Mill Pump Standard.

FIG. 506.

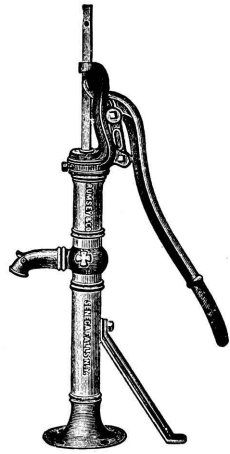


Fig. 506 represents our improved Wind-Mill Standard. It is strong, substantial, and well braced. It is made, as are all of our wind-mill pumps, so the piston rod always works in line with the plunger. This standard is made regularly with six or ten-inch stroke. We also make same with an adjustable stroke, so that a stroke of six, eight, or ten inches can be obtained by a simple adjustment of the bearer. The pipe screws into the standard immediately below the spout.

FIG. 506—Sizes and Prices.

No.	Fitted for Pipe. Inches.	Height. Inches.	Stroke. Inches.	Cipher.	Price.
3	1¼	43	6	Afford	$7.00
4	1¼	45	6	Affray	7.50
5	1¼	47½	6	Affright	8.00
4	2	45	10	Affront	9.00
5	2	47½	10	Affuse	9.50
4	2	45	6, 8 or 10. Adjustable.	Afloat	9.50
5	2	47½	6, 8 or 10. Adjustable.	Afoam	10.00

The above prices do not include cylinder.

"Eagle" Wind-Mill Force Pump, with Cock.

With Revolving Brake and Brass Piston-Rod.

FIG. 281.

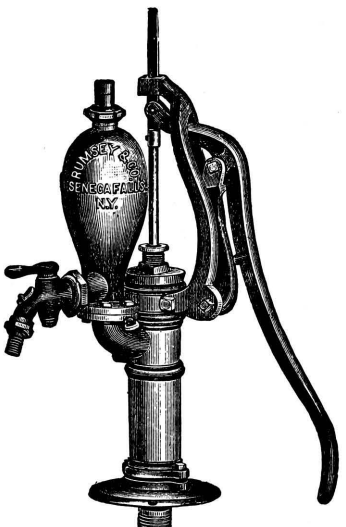


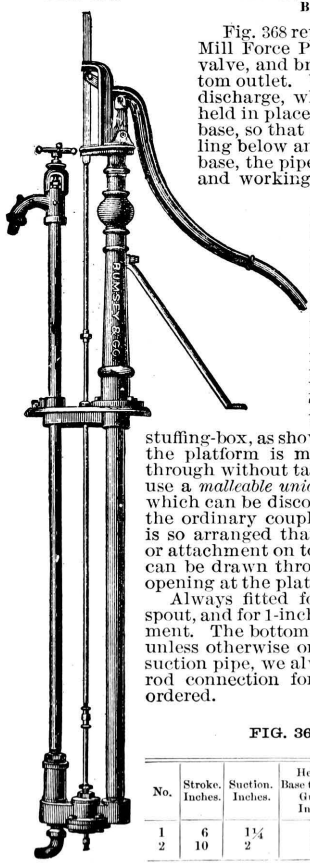
Fig. 281 represents our new Force Pump on base, arranged for use with wind engines. It is especially designed for forcing water to elevated tanks, and is also so arranged that the water can be drawn from the tank through the same pipe, and hose can be attached to the cock and conducted any distance, or in case of necessity it may be used as an efficient fire engine.

FIG. 281—Sizes and Prices.

No.	Suction. Inches.	Diam. Cylinder. Inches.	Stroke. Inches.	Capacity per Rev. Gallons.	IRON.		BRASS CYLINDER.	
					Cipher.	Price.	Cipher.	Price.
1	1¼	2½	6	1–8	Afraid	$13.50	Aghast	$19.00
2	1¼	3	6	1–6	Afresh	15 50	Aglow	20.50
3	1¼	4	6	2–5	Agape	24.00	Agog	37.00

Anti-Freezing Wind-Mill Force Pump Standard.

FIG. 368.



With Patent Vertical Distributing Valve and Brass Elbow Attachment.

Fig. 368 represents our Anti-Freezing Wind-Mill Force Pump with vertical distributing valve, and brass elbow attachment at the bottom outlet. We use 1¼-inch iron pipe for the discharge, which is made in one piece, and held in place with a set-screw at the platform base, so that by merely unscrewing the coupling below and loosening the set-screw at the base, the pipe can be pulled up, and the valve and working parts examined and repaired. We use 2-inch iron pipe for the air-chamber, which is done to strengthen the set length and to keep the working parts in perfect line with each other. At the bottom outlet we use a brass elbow union attachment, which is more convenient in making the regular pipe connections than any other way. We use a regular brass stuffing-box above the spout, which prevents all leakage when hose is connected. The valve is opened and closed by turning the wheel above the stuffing-box, as shown in cut. The opening through the platform is made larger, and pipe can pass through without taking off the standard. We also use a *malleable union coupling* for the plunger rod, which can be disconnected much easier than with the ordinary coupling. The lower working head is so arranged that by merely unscrewing the cap or attachment on top, a 2-inch or 2½-inch plunger can be drawn through, and so on up through the opening at the platform base.

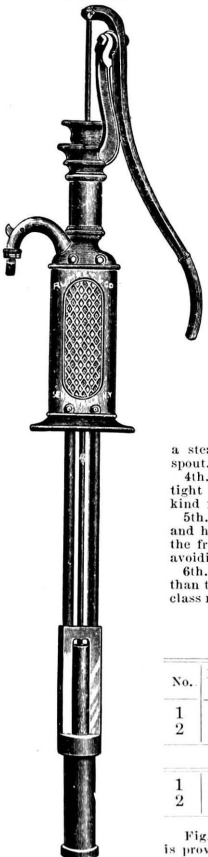
Always fitted for ¾-inch hose coupling at the spout, and for 1-inch iron pipe at brass elbow attachment. The bottom flange is always fitted as below, unless otherwise ordered. When fitted for 2-inch suction pipe, we always furnish a malleable forked rod connection for wood rod, unless otherwise ordered.

FIG. 368—Sizes and Prices.

No.	Stroke. Inches.	Suction. Inches.	Height, Base to Upper Guide. Inches.	Length, Base to Bottom Flange. Inches.	Cipher.	Price.
1	6	1¼	46	58	Ague	$18.00
2	10	2	50	58	Aider	19.50

Rumsey's New Double-Acting Force Pump.

FIG. 376.



With Revolving Top, for Shallow Wells.

Fig. 376 represents our New Double-Acting Force Pump, with revolving top, for shallow wells not more than 30 feet in depth.

The design of this pump differs from all others of its class, and is superior in most respects, both in simplicity and durability.

1st. It has a revolving top.

2d. There is no stuffing-box (or substitute for one) to keep packed, which is always a source of trouble in a force pump, and more especially so when placed below the platform and inaccessible without taking up the pump.

3d. It has ample air-chamber capacity to produce a steady stream of water from the spout.

4th. It has fewer joints to keep tight than any other pump of the kind made.

5th. The cylinder is copper-lined and highly polished, thus reducing the friction to almost nothing and avoiding all possibility of rusting.

6th. The water ways are larger than those of any other pump of the class manufactured.

FIG. 377.

FIG. 376—Sizes and Prices.

No.	Diam Cyl. Inches.	Suction. Inches.	Stroke. Inches.	For Wells. Feet.	Set Length. Feet.	Price.
1	3	1¼	6	26	5½	$14.00
2	3	1¼	6	30	9½	15.50

FIG. 377—Sizes and Prices.

1	3	1¼	6	25	5½	15.00
2	3	1¼	6	30	9½	16.50

Fig. 377 is the same in all respects as Fig. 376, except that it is provided with a Wind-Mill Revolving Top, the same as used upon our celebrated Wind-Mill Standard.

FIG. 525.

FIG. 526.

FIG. 527.

Adjustable Base Well Pumps.

The illustrations on the opposite page, Figs. 525, 526, and 527 show our new Adjustable Base Well Pumps. They are designed with ample proportions. The bases are broad, giving a firm support to the pump. The adjustable feature at once commends itself, meeting the various conditions encountered in pump setting.

Fig. 525 is the regular Lift Pump with rotating fulcrum.

Fig. 526 shows our Lift Pump fitted with top for either hand or wind-mill power.

Fig. 527 is a powerful Force Pump. The air chamber is large and has siphon spout. With hose a powerful stream may be thrown. The revolving top may be used either for hand or wind-mill power.

FIG. 525—Sizes and Prices.

No.	Diam. of Cylinder.	Size Pipe.	Gals. per Stroke.	IRON CYLINDER.		BRASS BODY CYLINDER.	
				Cipher.	Price.	Cipher.	Price.
1	2¾	1¼	1–7	Iambic	$ 8.25	Ideal	$12.25
2	3	1¼	1–6	Icicle	8.50	Idiom	12.50
3	3¼	1¼	1–5	Iconism	9.00	Idler	13.00

FIG. 526—Sizes and Prices.

1	2¾	1¼	1–7	Idolize	9.00	Ignorant	13.00
2	3	1¼	1–6	Idyllic	9.50	Iguana	13.50
3	3¼	1¼	1–5	Igneous	10.00	Illegal	14.00

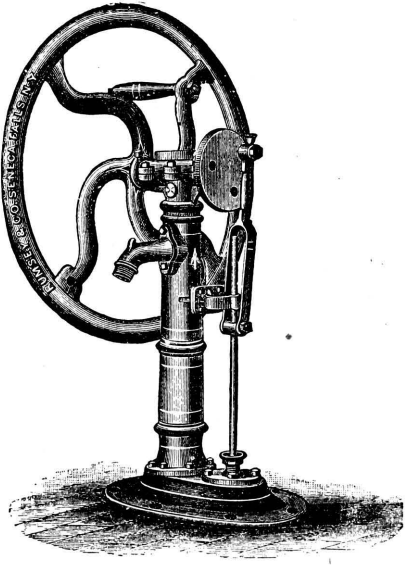
FIG. 527—Sizes and Prices.

1	2¾	1¼	1–7	Image	14.25	Immure	18.25
2	3	1¼	1–6	Imbalm	14.50	Impale	18.50
3	3¼	1¼	1–5	Imitate	15.00	Impeach	19.00

Extra Strong Deep-Well Force Pump Standard.

With Heavy Balance Wheel, Bronze Rod, Wrought Pitman and Crank.

FIG. 302.



The above represents a Force Pump Standard for use on deep wells. Has a heavy crank fly wheel, wrought-iron pitman, bronze rod, with rod guide. Stuffing-box with bronze gland is in the base. Stroke, 6 inches to 8 inches. Always fitted for 1½-inch pipe unless otherwise ordered.

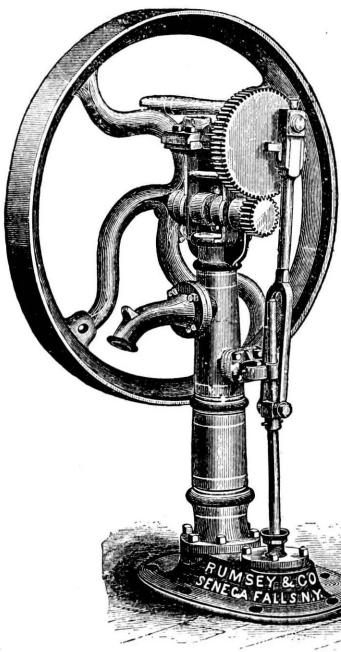
FIG. 302—Sizes and Prices.

No.	Fly Wheel. Inches.	Discharge.	Cipher.	Price.
1	30	Plain Spout or Flange	Akimbo	$39.00
2	30 x 4½	" " "	Akin	41.00

Deep Well Geared Force Pump Standard.

With Pulley Fly Wheel.

FIG. 300.



The Pump Standard illustrated herewith is designed for elevating water from very deep wells and to a great height, by either hand or power. The gearing is in the ratio of three to one. The Fly Wheel is very heavy and has a broad face, so that it can be run by belt power. A pipe flange can be attached instead of the spout if the water is to be piped to a distance. An air-chamber can be used in place of either. Fitted for 1½-inch pipe, unless otherwise ordered. Stroke, 6 and 8 inches.

FIG. 300—Sizes and Prices.

No.	Pulley Fly Wheel. Inches.	Discharge.	Cipher.	Price.
1	30 x 4½	Plain Spout or Pipe Flange	Albion	$65.00
2	30 x 4½	With Air-Chamber	Album	68.00
3	30 x 4½	Air-Chamber and Cock	Albumen	70.00

Improved Deep Well Standard.

FIG. 401.

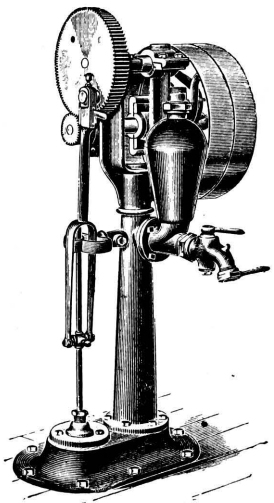


Fig. 401 shows our Improved Deep Well Standard. The column is extra heavy. Cut gears are used. The bearings are of ample size and lined with best Babbitt metal, scraped true. The stroke may be made either 6 inches or 8 inches. Fitted for 1½-inch pipe and 18 x 3½-inch pulleys, unless otherwise ordered.

FIG. 401—Size and Price.

Stroke. Inches.	Pulleys. Inches.	Cipher.	Price.
6 and 8	18 x 3½	Alcaid	$73.00

Deep Well Working Head.

Fig. 402 illustrates our Deep Well Working Head. It is of very heavy design. Cut gears ensuring smooth running. A substantial crosshead relieves the rod from all lateral strain. A special feature is that the plungers and rod may be withdrawn without moving the head. All the bearing surfaces are extra large, lined with Babbitt, scraped true. The stroke is adjustable to either 10 inches or 12 inches. Unless ordered otherwise, we furnish a single pulley 20 inches diameter 6 inches face.

FIG. 402.

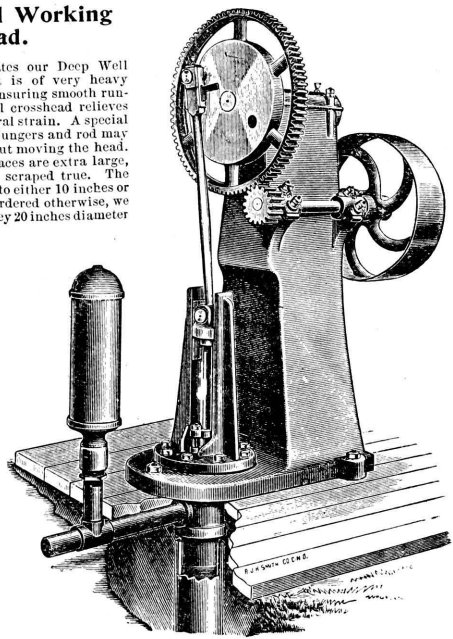


FIG. 402—Size and Prices.

Stroke.	MAXIMUM SIZES OF PIPE. INCHES.		PULLEY. INCHES.		Cipher.	Price.
	Connecting.	Discharge.	Diam.	Face.		
10–12	7	3½	20	6	Alchemic	$175.00

FIG. 402—Capacities.

Diameter and Stroke. Inches.	Height from Water to Delivery: Feet.	Gallons per Stroke.	Connecting Pipe. Inches.	Discharge Pipe. Inches.
2¼ x 12	600	.265	2½	2
2¾ x 12	500	.385	3	2
3¼ x 12	400	.431	3½	2
3¾ x 12	300	.573	4	2
4¼ x 12	225	.737	4½	3
4¾ x 12	175	.921	5	3
5¾ x 12	125	1.35	6	3½
6¾ x 12	100	1.85	7	3½

Reciprocating Power Column Pump.

With Crank Shaft, Pulley, and Balance Wheel, for Hand or Power.

FIG. 309.

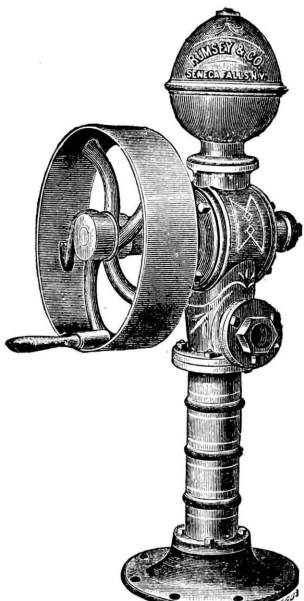


Fig. 309 is a hand or power pump adapted for raising water from shallow wells, cisterns, or other places where the water supply is not more than 25 or 28 feet below the pump.

It can be used in deeper wells by omitting the plunger and lower valve and attaching an independent cylinder or working barrel.

This is a pump well adapted for dairies, etc. The crank and shaft are made of cast-steel.

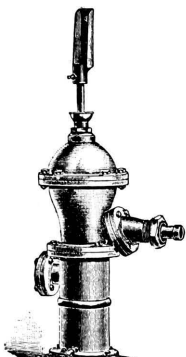
FIG. 309—Sizes and Prices.

No.	Diam. Cylinder. Inches.	Stroke. Inches.	Diam. Pipe. Inches.	Crank Pulley. Inches.	Tight and Loose Pulleys. Inches.	Cipher.	Price.
1	3	7	1¼	18 x 3	.....	Alembic	$27.00
2	3	7	1¼	.....	18 x 3	Alert	32.00

When used in wells exceeding ten feet in depth, we advise the use of our foot valve. Fig. 126.

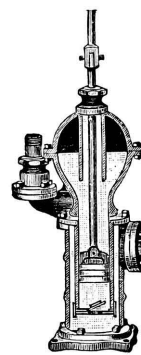
Wind-Mill Force Pump—"Tom Thumb."

FIG. 287.



Forked Rod.

FIG. 287.



The above cuts illustrate a Wind-Mill Force Pump, for deep wells, the cut on the left showing the finished pump, and that on the right being a sectional drawing showing the internal arrangement.

The suction orifice being situated at or near the top of the working cylinder, the valves are always submerged in from five to ten inches of water, keeping the pump *primed* at all times. We construct the inner cylinder of *brass*, with brass valve-seat, making it non-corrosive; the outer cylinder is of iron; the rod is cased with brass, and works through a brass stuffing-gland. We particularly commend this pump for use in connection with the pony power, Fig. 554; when so used it should be placed at a convenient depth in the well, and connected to the power by an iron or wooden pitman-rod. A knuckle-joint is attached to the top of the rod for welding to, but a strap for attachment to wood will be sent when so ordered.

To remove rod and plunger from this pump, the upper half of air-chamber can be disconnected and the whole lifted off, and the lower valve can be reached without disconnecting any of the piping.

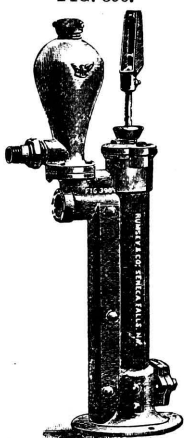
FIG. 287—Sizes and Prices.

No.	Diam. Cyl. Inches.	Pipe. Inches.	EIGHT-INCH STROKE.		TEN-INCH STROKE.		TWELVE-INCH STROKE.	
			Cipher.	Price.	Cipher.	Price.	Cipher.	Price.
0	2	1	Alestake	$21.50	Algerian	$25.25	Alienage	$30.50
00	2½	1¼	Aleutian	23.00	Algidity	27.25	Alienate	37.50
1	3	1½	Alewife	25.25	Algol	30.50	Aliform	40.00
2	3½	1½	Alfet	27.25	Algorism	37.50	Alight	45.00
3	4	2	Algae	30.50	Algous	40.00	Align	50.00
3½	4½	2	Algaroth	37.50	Alhenna	45.00	Aliment	54.00
4	5	2½	Algates	44.00	Alibi	50.00	Alimony	60.00
4½	5½	2½	Algebra	47.00	Alidade	56.00	Alioth	66.00
5	6	3	Algebraist	50.00	Alien	64.00	Aliped	78.00

The above sizes of pipes can be somewhat changed without affecting the efficiency of the pump. All parts of these pumps are made with special tools, so that they will interchange. Forked Rod for wind-mill, $3.00 extra.

Rumsey's "Always Primed" Suction and Force Pumps.

FIG. 390.



This pump is intended principally for wind-mill or other power pumping from deep or shallow wells. The suction orifice being situated near the top of the working cylinder, directly under the discharge, causes the suction valve to be always submerged in from five to ten inches of water so that the pump is always primed and ready for use.

By removing the top cap, the plunger can be removed from the cylinder and replaced without breaking any pipe connections. By removing the cover to the valve box at the bottom of the working cylinder, easy access is obtained to the valves.

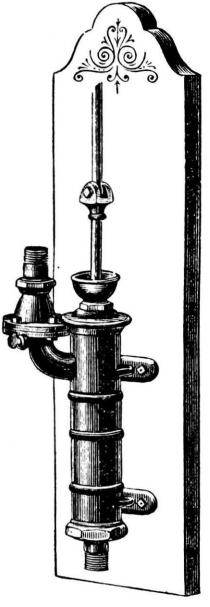
These pumps will lift and force water a total of 100 feet in height. With brass-lined cylinder, brass plunger and valves.

FIG. 390—Sizes and Prices.

No.	Diameter Cylinder. Inches.	Stroke. Inches.	Suction. Inches.	Discharge. Inches.	Gallons per Revolution.	Cipher.	Price.
0	2½	8	1½	1¼	1–6	Azoic	$25.00
1	3	8	1½	1¼	1–4	Azote	25.25
2	3½	8	2	1½	1–3	Azure	27.00
3	2½	12	1½	1¼	1–4	Alisma	27.50
4	3	12	1½	1¼	3–8	Alister	28.50
5	3½	12	2	1½	1–2	Alivo	30.00

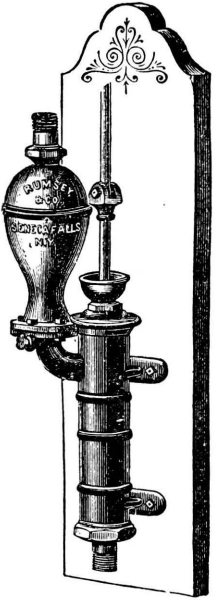
Wind-Mill Force Pump.

FIG. 365.



Forked Rod.

FIG. 366.



These pumps are used extensively in connection with wind-mills. They are arranged with pitman for any kind of power. Where water is forced to a great height we recommend Fig. 366, because the air-chamber is an assistance to the working of the pump.

FIGS. 365, 366—Sizes and Prices.

Number.	Diam. Cyl. Inches.	Stroke. Inches.	Suction and Discharge. Inches.	FIG. 365.				FIG. 366.			
				IRON.		BRASS.		IRON.		BRASS.	
				Cipher.	Price.	Cipher.	Price.	Cipher.	Price.	Cipher.	Price.
1	2	7	1	Aliquoit	$ 7.50	Alkaloid	$19.00	Allay	$10.00	Alley	$21.00
2	2½	7	1¼	Alkali	9.00	Alkoran	20.00	Allege	11.00	Alliance	22.00
3	3	7	1¼	Alkaline	10.50	Allah	25.00	Allegro	12.50	Allocate	27.00

When used in connection with a wind-mill it is preferable to have the Forked Rod Coupling (shown in cut), to which the wood rod of the wind-mill is attached. For Forked Rod Coupling, add $1.50 to list.

Rumsey's Celebrated Iron and Brass Cylinders.

For Shallow and Deep Wells.

FIG. 123.

FIG. 259.

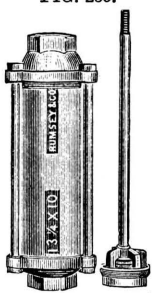


FIG. 369.

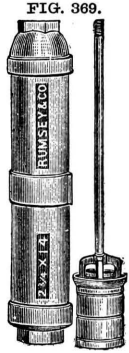


FIG. 123—Sizes and Prices.

Size. Inches.	Pipe. In.	IRON. Cipher.	IRON. Price.	BRASS-LINED. Cipher.	BRASS-LINED. Price.	BRASS SHELL. Cipher.	BRASS SHELL. Price.	BRASS SHELL AND PLUNGER. Cipher.	BRASS SHELL AND PLUNGER. Price.
2 x 9	1	Amass	$ 3.75	.....	.....	.....	.....	.....	.....
2¼ x 9	1	Amateur	4.00	.....	.....	.....	.....	.....	.....
2½ x 9	1¼	Amaze	4.35	.....	.....	.....	.....	.....	.....
2¾ x 9	1¼	Amazed	4.70	.....	.....	.....	.....	.....	.....
3 x 9	1¼	Amazing	5.00	.....	.....	.....	.....	.....	.....
3⅛ x 9	1¼	Ameer	5.30	.....	.....	.....	.....	.....	.....
2¼ x 10	1	Amen	4.00	Annual	$ 7.25	Apis	$ 7.50	Apprisal	$ 8.25
2½ x 10	1¼	Amend	4.35	Annuity	7.75	Apishly	8.00	Approach	8.75
2¾ x 10	1¼	Amiable	4.70	Annul	8.25	Apodal	8.75	Approve	9.75
3 x 10	1¼	Amid	5.00	Annulet	8.75	Apogee	9.50	Apricot	10.50
3⅛ x 10	1¼	Amiss	5.30	Anode	9.25	Apollo	10.50	Apron	11.50
3½ x 10	1½	Amity	5.60	Anodyne	9.75	Apology	11.50	Apsis	12.50
4 x 10	1½	Ammonia	6.50	Anoint	10.50	Apoplex	14.00	Aptness	15.00
4½ x 10	2	Amnesty	6.75	Anomaly	12.00	Apostate	16.00	Aquatic	17.25

FIG. 259—Sizes and Prices.

2½ x 10	1¼	Among	4.35	Antares	7.75	Apostle	8.00	Aqueous	8.75
2¾ x 10	1¼	Amorous	4.70	Antedate	8.25	Appall	8.75	Arab	9.75
3 x 10	1¼	Amount	5.00	Antelope	8.75	Apparel	9.50	Arabian	10.50

FIG. 369—Sizes and Prices.

2¼ x 12	1¼	Ample	5.75	Antenna	8.00	Appeach	10.50	Arabic	11.50
2½ x 12	1¼	Amplify	6.00	Anthem	8.50	Appeal	11.50	Arise	12.50
2¾ x 12	1¼	Amply	6.50	Antics	9.00	Appear	11.75	Arbor	13.25
3 x 12	1¼	Anchor	7.00	Antidote	9.50	Appease	12.75	Arch	14.25
3¼ x 12	1¼	Ancient	7.50	Antimony	10.00	Append	14.00	Arched	15.00
3½ x 12	1½	Anecdote	8.00	Antipode	10.50	Appense	15.50	Archer	17.50
4 x 12	1½	Anew	9.25	Antique	12.50	Appetite	21.50	Archery	24.00
4½ x 12	2	Angel	10.50	Antler	15.00	Applaud	26.00	Archive	29.00
2¼ x 14	1¼	Angelic	6.00	Anvil	8.75	Apple	11.25	Arctic	12.50
2½ x 14	1¼	Anglican	6.50	Anxious	9.25	Appliable	11.75	Ardent	13.00
2¾ x 14	1¼	Angler	7.00	Aorist	9.75	Applicate	12.50	Ardor	14.00
3 x 14	1¼	Anger	7.50	Apathy	10.25	Apply	13.50	Arena	15.00
3¼ x 14	1¼	Angry	8.00	Apex	10.75	Appoint	15.00	Argand	16.75
3½ x 14	1½	Anguish	8.50	Aperient	11.25	Apportion	16.50	Argent	19.00
4 x 14	1½	Angular	10.00	Aperture	14.00	Apposite	23.75	Argil	27.00
4½ x 14	2	Animal	12.50	Apex	17.00	Appraise	28.50	Argal	32.00

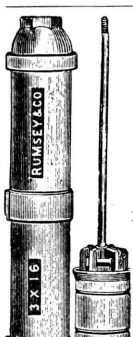


FIG. 124.

Rumsey's Celebrated Iron and Brass Cylinders.

For Shallow and Deep Wells.

FIG. 125.

FIG. 124—Sizes and Prices.

Size. Inches.	Pipe. In.	IRON. Cipher.	Price.	BRASS-LINED. Cipher.	Price.	BRASS SHELL. Cipher.	Price.	BRASS SHELL AND PLUNGER. Cipher.	Price.
2 x 16	1¼	Argue	$ 6.00	Ashlar	$ 9.00	Astute	$10.50	Aureole	$12.00
2¼ x 16	1¼	Argument	6.50	Ashy	9.50	Asylum	12.00	Auricle	13.50
2½ x 16	1¼	Arian	7.00	Asian	10.00	Atavism	12.50	Auriga	14.00
2¾ x 16	1¼	Aries	7.50	Asiatic	10.50	Ataxy	13.00	Aurist	14.50
3 x 16	1¼	Aright	8.00	Aside	11.00	Atheist	14.00	Aurora	15.50
3¼ x 16	1½	Ark	8.50	Asinine	11.50	Athlete	16.00	Austere	18.00
3½ x 16	1½	Arms	9.00	Askance	12.00	Ath rart	18.50	Austral	21.00
4 x 16	1½	Armature	10.50	Askew	15.75	Atilt	26.00	Austrian	29.00
4½ x 16	2	Armed	14.00	Aslant	19.00	Atlas	30.00	Authentic	35.00
2¼ x 18	1¼	Armlet	7.50	Asleep	10.25	Atom	13.00	Author	14.50
2½ x 18	1¼	Armor	8.00	Aslope	10.75	Atomic	13.75	Authorize	15.25
2¾ x 18	1¼	Armorial	8.50	Aspect	11.25	Atrophy	14.85	Autocrat	16.35
3 x 18	1¼	Armory	9.00	Aspen	11.75	Attach	16.50	Autograph	18.00
3¼ x 18	1¼	Army	9.25	Asperate	12.25	Attack	18.50	Autumn	20.50
3½ x 18	1½	Arnica	9.50	Asphalt	12.75	Attain	21.50	Avail	24.00
4 x 18	1½	Arrack	10.50	Asphyxia	17.50	Attainder	29.00	Avarice	32.50
4½ x 18	2	Arraign	13.50	Aspic	22.00	Attaint	33.00	Avatar	37.50
5 x 18	2½	Arrange	20.00	Aspirate	28.50	Attar	37.00	Avenge	43.00

FIG. 125—Sizes and Prices.

2¼ x 12	1¼	Arrant	5.75	Aspire	8.00	Attempt	10.50	Avenue	11.50
2½ x 12	1¼	Arras	6.00	Asquint	8.50	Attender	11.50	Average	12.50
2¾ x 12	1¼	Array	6.50	Assail	9.00	Attentive	11.75	Aversely	13.25
3 x 12	1¼	Arrear	7.00	Assault	9.50	Attest	12.75	Averter	14.25
3¼ x 12	1½	Arrest	7.50	Assay	10.00	Attic	14.00	Aviary	15.00
3½ x 12	1½	Arrive	8.00	Assent	10.50	Attire	15.50	Avidity	17.50
4 x 12	1½	Arrogant	9.25	Assert	12.50	Attorney	21.50	Avocate	24.00
4½ x 12	2	Arrow	10.50	Assess	15.00	Attract	26.00	Avoid	29.00
2¼ x 14	1¼	Arsenic	6.00	Assessor	8.75	Attribute	11.25	Avouch	12.50
2½ x 14	1¼	Arson	6.50	Assets	9.25	Attrition	11.75	Avowable	13.00
2¾ x 14	1¼	Arterial	7.00	Assign	9.75	Attune	12.50	Avowal	14.00
3 x 14	1¼	Artery	7.50	Assist	10.25	Auburn	13.50	Awaken	15.00
3¼ x 14	1¼	Article	8.00	Assize	10.75	Auction	15.00	Award	16.75
3½ x 14	1½	Artifice	8.50	Assort	11.25	Auctioneer	16.50	Aware	19.00
4 x 14	1½	Artisan	10.00	Assuage	14.00	Audible	23.75	Awesome	27.00
4½ x 14	2	Artist	12.50	Assume	17.00	Audience	28.50	Awful	32.00
2 x 16	1¼	Asbestos	6.00	Assure	9.00	Audit	10.50	Awkward	12.00
2¼ x 16	1¼	Ascend	6.50	Assyrian	9.50	Auditor	12.00	Awning	13.50
2½ x 16	1¼	Ascent	7.00	Aster	10.00	Augean	12.50	Awry	14.00
2¾ x 16	1¼	Ascertain	7.50	Astern	10.50	Aurum	13.00	Axial	14.50
3 x 16	1¼	Acetic	8.00	Asteroid	11.00	Augury	14.00	Axillar	15.50
3¼ x 16	1¼	Ashen	8.50	Asthma	11.50	August	16.00	Axiom	18.00
3½ x 16	1½	Ashery	9.00	Astonish	12.00	Auntie	18.50	Axle	21.00
4 x 16	1½	Ashes	10.50	Astral	15.75	Aural	26.00	Azimuth	29.00

Rumsey's Celebrated Iron and Brass Cylinders.

FIG. 258.
Wood Pump Cylinder.

FIG. 381.
Double-Acting Cylinder.

FIG. 258—Sizes and Prices.

Size. Inches.	Pipe. Inches.	IRON. Cipher.	IRON. Price.
3 x 12	1¼	Packer	$3.00
3½ x 12	1¼	Packet	3.50
3½ x 12	1½	Paddle	4.00
4 x 12	2	Paddock	4.50

FIG. 381—Sizes and Prices.

Size. Inches.	Pipe. Inches.	IRON. Cipher.	IRON. Price.
2¼ x 7	1¼	Padlock	$10.00
3 x 7	1½	Pagan	12.00
4 x 7	2	Pagoda	14.00
.....	.....	.....	.....

Drive Well Filter Points.

FIG. 226½.

FIG. 226½—Brass Jacket Points.

Trade Number.	Inside Diameter. Inches.	Length of Point. Inches.	Length of Jacket. Inches.	Number of Holes.	Number of Gauze 60. Cipher.	Number of Gauze 60. Price per Doz.	Number of Gauze 90. Cipher.	Number of Gauze 90. Price per Doz.
74	1	24	18	72	Palmer	$33.00	Paper	$ 52.00
76	1	30	24	96	Palsy	42.00	Papoose	64.00
78	1	36	30	120	Pamper	51.00	Papyrus	76.00
90	1¼	24	18	100	Pamphlet	36.00	Parachute	60.00
94	1¼	30	24	130	Pander	46.00	Parade	75.00
98	1¼	36	30	165	Pandora	56.00	Paradigm	90.00
136	1½	24	18	120	Panel	48.00	Paradox	78.00
140	1½	30	24	162	Panic	60.00	Paraffine	96.00
144	1½	36	30	198	Panoply	72.00	Paragon	114.00

Foot Valve and Suction Strainers.

FIG. 126.

FIG. 382.

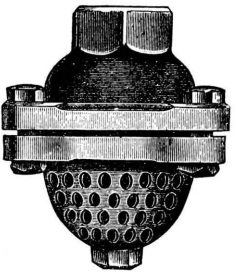


FIG. 383.

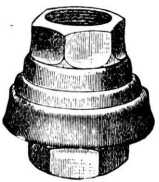


FIG. 384.

FIG. 265.

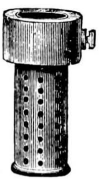


FIG. 266.

Foot Valves.

Figs. 126, 382, 383, and 384 show our standard Foot Valves, designed to attach to lower end of suction pipes to relieve the upper working valves of the weight of the column of water when the pump is not in use. This valve, being at the bottom, not only prevents the water from passing back, but forms a support for that in the suction pipe, keeping it constantly so near the piston that the pump cannot fail in perfect operation under ordinary circumstances.

FIGS. 126, 382, 383, 384—Sizes and Prices.

No.	For Pipe. In.	FIG. 126.		FIG. 382.		FIG. 383.		FIG. 384.	
		Cipher.	Price.	Cipher.	Price.	Cipher.	Price.	Cipher.	Price.
1	1	Parapet	$2.00	Parhelic	$2.25	Parole	$1.75	Partner	$2.50
2	1¼	Parasite	2.25	Parish	2.50	Paroquet	2.00	Partridge	3.00
3	1½	Parasol	2.50	Parity	3.00	Parracide	2.25	Paschal	3.50
4	2	Paravail	3.00	Parlance	3.50	Parrot	2.50	Pasquin	4.50
5	2½	Parboil	3.50	Parley	4.50	Parsee	3.00	Passado	5.00
6	3	Parcel	4.50	Parlor	5.00	Parsley	3.50	Passant	6.00
7	3½	Parch	5.00	Parlous	6.00	Parsnip	4.50	Passion	8.00
8	4	Pardon	6.00	Parmesan	8.00	Parson	5.00	Pastel	10.00
9	5	Paregoric	8.00	Parochial	10.00	Particle	6.00	Pastern	12.00
10	6	Parental	10.00	Parody	12.00	Partisan	8.00	Pastor	15.00

Figs. 265 and 266 represent Strainers for wrought-iron pipe. Fig. 265 slips on over end of pipe and is held in place by set-screw as shown. Fig. 266 is threaded for pipe.

	1-inch.	1¼-inch.	1½-inch.	Price.
Fig. 265, ...	Patient	Patois	Patriot	$ .35

	1-inch.	1¼-inch.	1½-inch.	Price.	2-inch.	2½-inch.	Price.
Fig. 266,	Patrol	Patron	Pattern	$ .35	Pauper	Pavement	$ .50

RUMSEY'S PUMPS.

Hand Force Pumps.

"Watch" Force Pumps.

House Force Pumps.

Diaphragm Pumps.

Brass Double-Cylinder Force Pumps.

Horizontal Double-Acting Force Pumps.

Thresher Tank Pumps.

"Excelsior" Pumps for Power.

"Cataract" Bilge Pumps.

"Eagle" Ship's Main and Bilge Pumps.

Double-Cylinder Ship's Force Pump.

Double-Acting Railroad Force Pumps.

Column Pumps.

Geared Column Pumps.

Pressure Pumps.

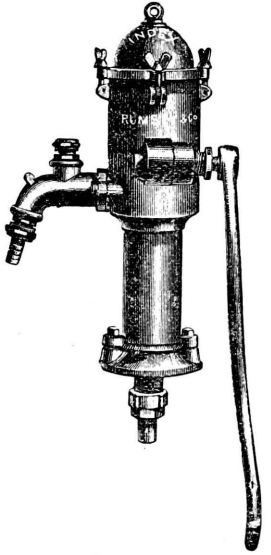
Double-Acting Pacific Railroad Force Pumps.

Counter Shafting.

Horse-Power Pumping Outfit.

New Style Lift and Force Pump—"The Index."

FIG. 282.



"The Index" combines all the perfections of the pitcher-spout cistern pump with the same ease of access to the working parts, and also contains all the valuable qualities of a force pump.

The pump is provided with a "union coupling" on the base, and is fitted for lead or iron pipe. The valve seat and stuffing gland are of brass.

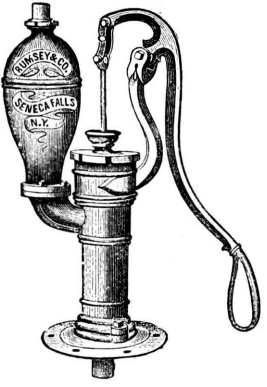
DIRECTIONS FOR USE.

By unscrewing the brass plug, situated at the top of the air-chamber, it is changed into an ordinary "lift" pump; the reverse action again changes it back to a powerful "force" pump. To gain access to the interior, remove the top of the air-chamber by unscrewing the thumb-nuts which hold it in place.

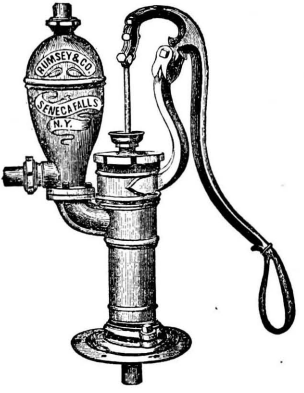
FIG. 292—Size and Price.

Number.	Diam. of Cyl. Inches.	Stroke. Inches.	Size of Pipe. Inches.	Cipher.	Price.
1	3¼	5	1½	Baboon	$12.00

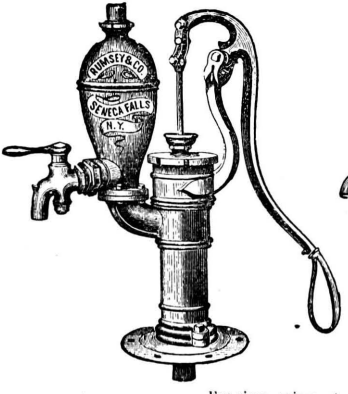
Force Pump on Base.
With Air-Chamber.
FIG. 131.



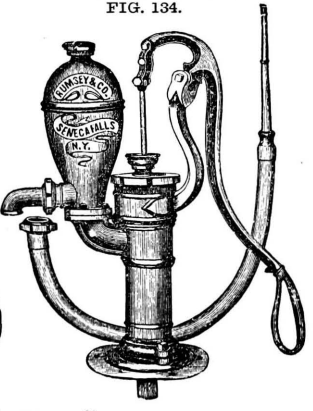
Force Pump on Base.
With Air-Chamber, Having Two Outlets.
FIG. 132.



Force Pump on Base.
Air-Chamber with Two Outlets, Cock on Side Outlet.
FIG. 133.



Force Pump on Base.
With Fire Engine Attachments.
FIG. 134.



For sizes, prices, etc., see page 62.

Force Pump on Base.

FIG. 130.

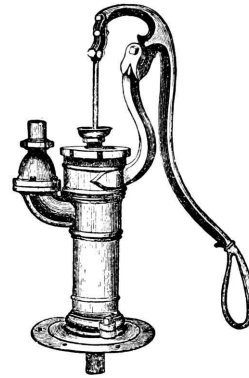


Fig. 130 represents a very useful hand force pump. The discharge is without an air-chamber, and fitted with a cap and brass tube to which either iron or lead pipe may be attached.

It has a revolving fulcrum, brass rod, brass stuffing-box, and brass valve seat, with union coupling. Made also with brass cylinders and brass plungers.

On page 61 we show four variations of this pump.

FIGS. 130, 131, 132, 133, 134—Sizes and Prices.

No.	Diam. Cylinder. Inches.	Stroke. Inches.	Size Pipe. Inches.	Capacity per Stroke. Gallons.	Fig.	No. 1.			
						IRON.		BRASS CYLINDER.	
						Cipher.	Price.	Cipher.	Price.
1	2½	5	1¼	1–8	**130**	Baby	$ 9.50	Bachelor	$14.00
2	3	5	1¼	1–6	**131**	Backward	10.00	Badge	15.00
3	4	5	1½	2–5	**132**	Baize	11.00	Bakery	16.00
....	.....	.....	.....	.....	**133**	Ballot	12.50	Balsam	17.50
....	.....	.....	.....	.....	**134**	Bang	12.00	Banish	17.00

FIGS. 130, 131, 132, 133, 134—Sizes and Prices.

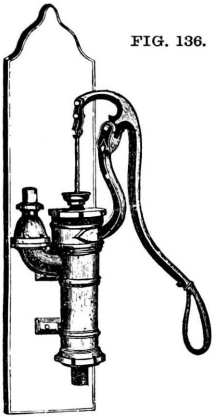
Fig.	No. 2.				No. 3.			
	IRON.		BRASS CYLINDER.		IRON.		BRASS CYLINDER.	
	Cipher.	Price.	Cipher.	Price.	Cipher.	Price.	Cipher.	Price.
130	Babyhood	$11.00	Backbite	$15.00	Babyish	$18.00	Backbone	$28.00
131	Baggage	12.00	Baguio	16.00	Bagpipe	21.00	Bailiff	30.00
132	Balcony	13.00	Baldness	17.00	Baleful	21.00	Ballad	32.00
133	Baluster	14.50	Banana	18.50	Bandage	23.50	Bandbox	34.50
134	Banker	13.00	Bantam	19.00	Barb	22.00	Bargain	37.00

For 3 feet of hose and discharge pipe, add $3 to list price.

The 4-inch pump has rubber buffer on fulcrum.

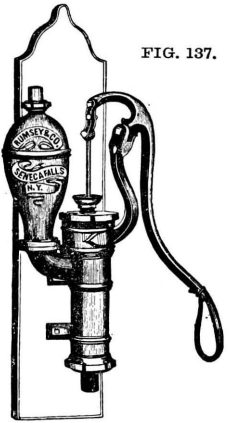
Force Pump on Plank.
With Brackets, Brass Piston, Revolving Brake, Etc.

FIG. 136.



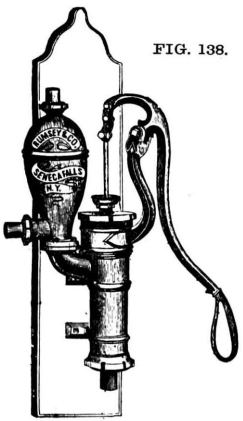
Force Pump on Plank.
With Air-Chamber.

FIG. 137.



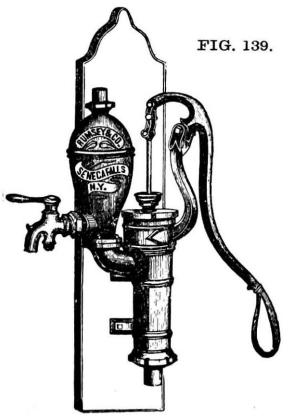
Force Pump on Plank.
With Air-Chamber having Two Outlets.

FIG. 138.



Force Pump on Plank.
With Air-Chamber having Two Outlets, Cock on Side Outlet.

FIG. 139.



Force Pump on Plank.

FIGS. 136, 137, 138, 139.

Similar in construction to Fig. 130, except having brackets on the cylinder for bolting to wall, post, or partition, instead of base.

Revolving fulcrum, brass valve seat, brass plunger rod, and brass stuffing-box, anti-freezing.

Prices include plank.

The 4-inch pump has a rubber buffer on fulcrum.

Figs. 137, 138, and 139 show variations of Fig. 136 adapting the pump to different uses.

FIGS. 136, 137, 138, 139—Sizes.

Number.	Diameter Cylinder. Inches.	Stroke. Inches.	Size Pipe. Inches.	Gallons per Stroke.
1	2½	5	1¼	1–8
2	3	5	1¼	1–6
3	4	5	1½	2–5

FIG. 136—Prices.

No.	IRON.		BRASS CYLINDER.	
	Cipher.	Price.	Cipher.	Price.
1	Barge	$ 9.50	Bashful	$14.00
2	Base	11.00	Basilica	15.00
3	Bashaw	18.00	Bastile	30.00

FIG. 137—Prices.

No.	IRON.		BRASS CYLINDER.	
	Cipher.	Price.	Cipher.	Price.
1	Bastion	$10.00	Bathos	$15.00
2	Batch	12.00	Battery	16.00
3	Bathed	21.00	Battle	31.00

FIG. 138—Prices.

1	Bauble	11.00	Bayou	16.00
2	Baulk	13.00	Bazaar	17.00
3	Bayonet	21.00	Beadle	32.00

FIG. 139—Prices.

1	Beagles	12.50	Beans	17.00
2	Beaker	14.50	Beastly	18.50
3	Beam	23.50	Beaten	34.50

The Florida Force Pump.

FIG. 42.

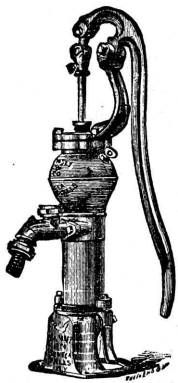
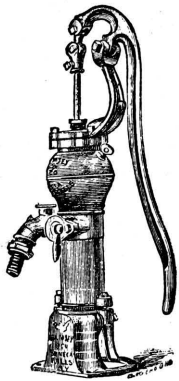


FIG. 40.



This cut illustrates our new and improved Force Pump, the best and cheapest pump of the class ever put on the market. It can be used on driven wells, on sinks over cisterns, for filling wash basins, bath tubs, tanks in upper rooms, etc. It has a greater capacity than many more expensive pumps: it will throw a continuous and powerful stream to a height of 40 feet or more, and when used with hose and our "Gem" or "Lilly" nozzle, it will diffuse a poisonous solution over a wide area, and destroy bugs, or worms which attack plants and trees. It is the best Spraying pump ever offered to the trade, and as such, it will become invaluable to the farmer, orchardist, and horticulturalist. Unless otherwise ordered, we shall always fit it for ¾-inch hose.

FIG. 42—Sizes and Prices.

No.	Diam. Cyl. Inches.	Stroke. Inches.	Capacity per Rev. Gallons.	Pipe. Inches.	IRON.		COPPER-LINED CYLINDER.	
					Cipher.	Price.	Cipher.	Price.
0	2½	5	1–10	1¼	Beauty	$ 9.00	Beaver	$11.25
1	3½	5	1–5	1½	Beaux	10.00	Becalm	12.50

FIG. 40—Sizes and Prices.

0	2½	5	1–10	1¼	Beaufin	11.50	Beauish	13.75
1	3½	5	1–5	1½	Beautify	12.50	Beautiful	15.00

Fig. 40 same as Fig. 42 except Cock Spout as shown.

Rumsey's Watch Pumps.

FIG. 551.

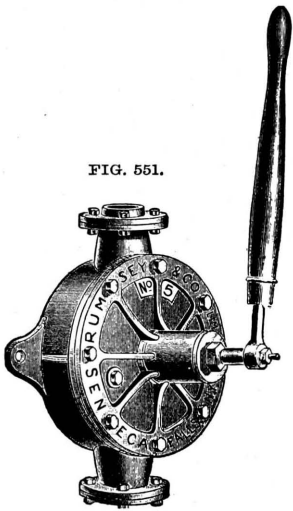
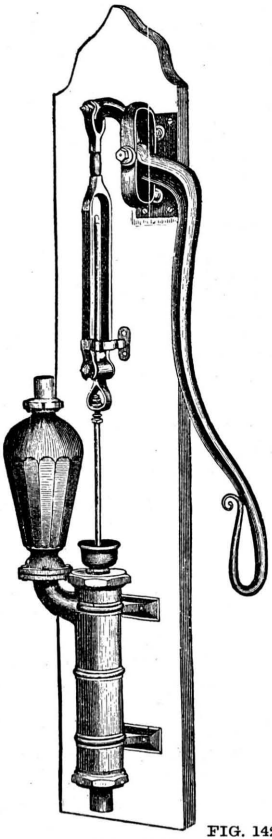


Fig. 551 is operated by means of a lever which may be worked either horizontally or vertically. By its construction very little power is consumed in friction. The valves are of brass with brass wing pistons, consequently these pumps can be used to pump hot or cold liquids, wines, oil, cider, acids, etc. The pipe connections are flanged so that pump can be removed at any time without disturbing the pipes.

FIG. 551—Sizes and Prices.

Number.	Suction and Discharge. Fitted for Pipe. Inches.	Approximate Capacity per Hour. Gallons.	IRON.		BRASS.	
			Cipher.	Price.	Cipher.	Price.
1	½	264	Became	$ 5.00	Bedim	$ 7.00
2	¾	352	Becharm	6.00	Bedizen	9.00
3	1	427	Beckon	7.25	Bedlam	12.50
4	1¼	634	Becloud	9.00	Bedpost	15.00
5	1¼	950	Bedabble	10.00	Bedrench	18.75
6	2	1346	Bedaubed	12.00	Bedtime	21.25

The Iron pumps have brass valves, brass valve box and brass wing piston.



House Force Pump.

Mounted on Plank, with Pitman, Guide, and Air-Chamber.

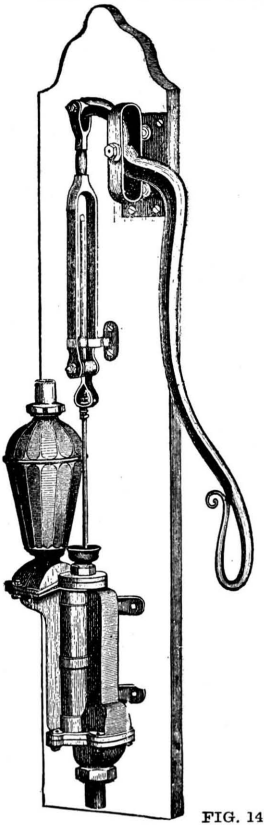
FIG. 142.

Fig. 142 is a representation of our unequaled House Force Pump mounted on a plank of perfectly seasoned lumber. It is made in the most thorough and substantial manner, is beautiful in design, tastefully painted, and simple in action. It altogether combines symmetry, strength, and utility in the highest degree, and no well-appointed house can afford to be without it. This pump is especially designed to draw water from the cistern and force it to supply elevated points, such as bathing rooms, reservoirs in the upper part of the building, etc.

We have recently greatly improved this class of pumps, until they are as nearly as possible perfect in every respect. For indoor use they cannot be surpassed by any other pump in the market. They are fitted for lead or iron pipe and made right or left-handed as ordered.

FIG. 142—Sizes and Prices.

No.	Size of Pipe. Inches.	Diam. Cylinder Inches.	Stroke. In.	Capacity per Rev. Gallons.	IRON.		BRASS CYLINDER.		BRASS.	
					Cipher.	Price.	Cipher.	Price.	Cipher.	Price.
1	1	2	8	1-9	Beefeater	$16.00	Befall	$21.00	Beget	$28.00
2	1¼	2½	8	1-6	Beefsteak	17.00	Befits	23.00	Beggar	32.00
3	1¼	3	8	1-4	Beehive	18.50	Befoul	25.00	Beginner	37.00



Double-Acting House Force Pump.

Mounted on Plank with Pitman and Guide Air-Chamber, Etc.

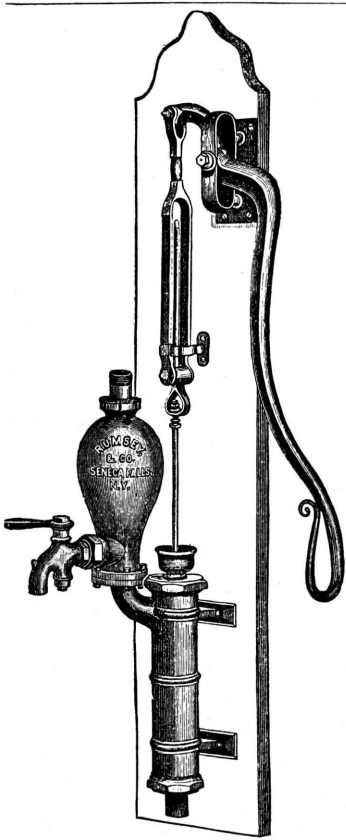
FIG. 145.

Fig. 145 is made as shown in cut, but if so desired, we make the air-chamber with two outlets at the same price. These pumps, although double-acting, and raising double the volume of water that the single-acting pump of the same diameter will do, yet require but a fraction more power to accomplish the same desideratum.

The water courses are large and direct, reducing the friction to its minimum, giving these pumps the highest possible economy of power and efficiency in operation.

FIG. 145—Sizes and Prices.

No.	Size of Pipe. Inches.	Diam. Cyl. Inches.	Stroke. In.	Capacity per Rev. Gallons.	IRON.		BRASS WITH IRON AIR-CHAMBER.		BRASS WITH BRASS AIR-CHAMBER.	
					Cipher.	Price.	Cipher.	Price.	Cipher.	Price.
1	1	2	8	1–5	Begirt	$15.50	Begun	$28.00	Behind	$ 38.00
2	1¼	2½	8	1–3	Begotten	19.00	Behalf	40.00	Behold	50.00
3	1½	3	8	1–2	Begrimed	23.00	Behave	54.00	Belate	64.00
4	2	3½	8	6–7	Begrudge	28.50	Behead	73.00	Belch	93.00
5	2	4	8	7–8	Beguile	42.00	Behest	98.00	Belfry	118.00



House Force Pump.

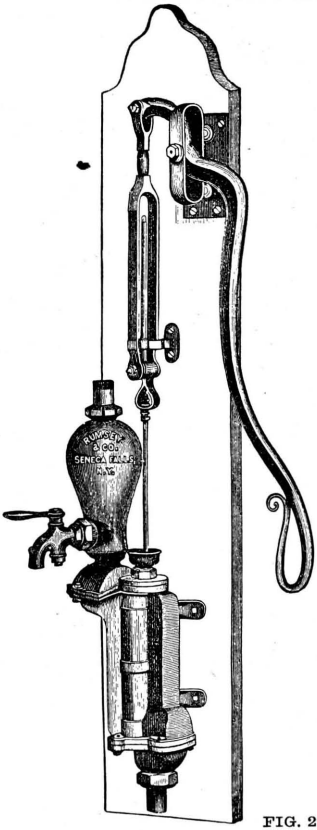
On Plank, with Air-Chamber having Two Discharges and Cock.

FIG. 290.

Fig. 290 represents a pump similar to Fig. 142, but with the addition of an air-chamber having *two* discharges and a cock on side outlet, these improvements greatly enlarging its usefulness. The faucet is threaded on the spout end for attaching hose, which convenience, in case of fire, will prove invaluable. This pump, like all of its class, is made right or left-handed, as ordered, and can be made for pumping hot water, acids, etc. The cock is made of iron, with brass plug, if intended for hot or cold water: but if desired for pumping wines, liquors, or acids, it is all made of the best bronze. This pump is perfect in principle and construction and unsurpassed for house purposes by any in the market.

FIG. 290—Sizes and Prices.

No.	Size of Pipe. Inches.	Diam. Cyl. Inches.	Stroke. In.	Capacity per. Rev. Gallons.	IRON.		BRASS CYLINDER.		BRASS.	
					Cipher.	Price.	Cipher.	Price.	Cipher.	Price.
1	1	2	8	1-9	Belief	$18.50	Belong	$23.50	Bencher	$32.00
2	1¼	2½	8	1-6	Bellman	19.50	Beloved	25.50	Bender	36.00
3	1¼	3	8	1-4	Bellows	21.00	Bemoan	27.50	Beneath	41.00



Double-Acting House Force Pump.

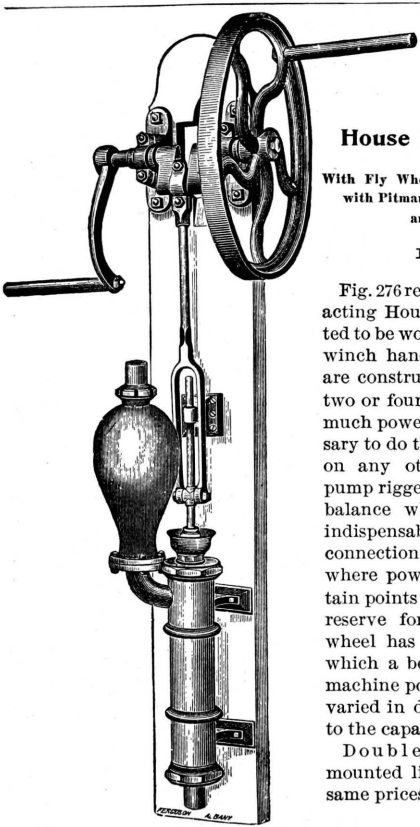
Mounted on Plank. Air-Chamber with Cock. In Iron or Brass as Ordered.

FIG. 291.

Fig. 291 shows our Double-Acting House Force Pump, described under Fig. 145, with the addition of a side outlet and cock—a decidedly useful and convenient improvement in many respects. We take pleasure in recommending Fig. 291 to our customers, and well knowing its excellent qualities as a house pump, we guarantee perfect satisfaction in its use, when properly set up. The capacity is nearly double that of a single-acting pump of the same diameter, while the extra power needed to work it does not at all equal the increased capacity. When so ordered, we fit these pumps with metallic valves and piston for pumping hot water, etc.

FIG. 291—Sizes and Prices.

No.	Size of Pipe. Inches.	Diam. Cylinder Inches.	Stroke. In.	Capacity per Rev. Gallons.	IRON.		BRASS WITH IRON AIR-CHAMBER.		BRASS WITH BRASS AIR-CHAMBER.	
					Cipher.	Price.	Cipher.	Price.	Cipher.	Price.
1	1	2	8	1–5	Benedict	$18.00	Benzoin	$30.50	Beryl	$ 41.00
2	1¼	2½	8	1–3	Bengalee	21.50	Bequest	42.50	Besecch	51.00
3	1½	3	8	1–2	Benight	25.50	Bereave	56.50	Besiege	65.00
4	2	3½	8	6–7	Benefice	31.00	Bereft	75.50	Besmear	95.00
5	2	4	8	7–8	Benumb	45.00	Bergamot	101.00	Besom	120.00



House Force Pump.

With Fly Wheel, Mounted on Plank, with Pitman, Guide, Crank Shaft, and Handles.

FIG. 276.

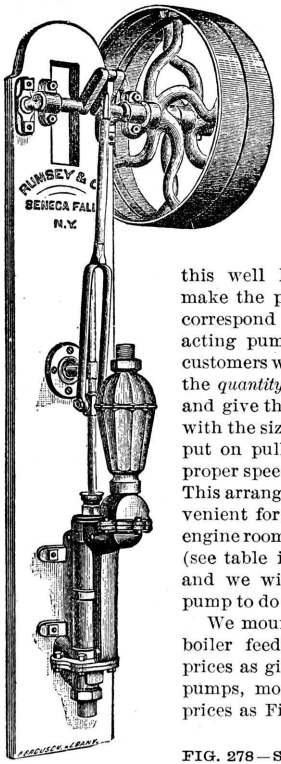
Fig. 276 represents our single-acting House Force Pump, fitted to be worked by crank with winch handles. The handles are constructed for the use of two or four men, although so much power is no more necessary to do the same work than on any other single-acting pump rigged differently. The balance wheel is an almost indispensable adjunct in this connection, being a reservoir where power is stored at certain points of the stroke for a reserve force. The balance wheel has a 2-inch face, on which a belt can be used for machine power. The wheel is varied in diameter, according to the capacity of the pump.

Double-Acting Pumps mounted like Fig. 276 at the same prices as Fig. 278.

FIG. 276—Sizes and Prices.

No.	Size of Pipe. Inches.	Diameter of Cyl. Inches.	Stroke. Inches.	Capacity per Rev. Gallons.	IRON.		BRASS CYLINDER.	
					Cipher.	Price.	Cipher.	Price.
1	1	2	8	1-9	Bespeak	$36.00	Bestride	$45.00
2	1¼	2½	8	1-6	Bestir	38.00	Betake	48.00
3	1¼	3	8	1-4	Bestowal	40.00	Bethink	54.00

For Iron Cock, Brass Plug, add to list (Betide), ... $2.50
For All Brass Cocks, " " (Betaken), ... 5.00



Double-Acting Force Pump.

With Tight and Loose Pulleys. Mounted on Plank. For Power.

FIG. 278.

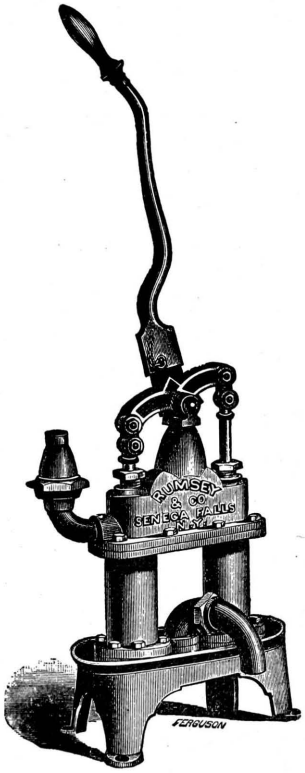
Fig. 278 is a correct illustration of our Double-Acting Force Pump, mounted on plank, with pitman, guide, crank, and tight and loose pulleys, for machine power. No further description is necessary for this well known and popular pump. We make the pulleys and all other appliances to correspond with any size of double or single-acting pumps that we manufacture. If our customers when ordering this figure will specify the *quantity* of work required to be performed, and give the speed of their main shaft together with the size of the driver pulley, we will then put on pulleys of the right size to insure the proper speed at which the pump should be run. This arrangement will be found extremely convenient for running boiler feeding pumps in engine rooms. Please give horse-power of boiler (see table in preface to steam boiler pumps), and we will recommend the proper size of pump to do the work.

We mount single-acting pumps (except the boiler feeding) in this manner at the same prices as given under Fig. 276. Double-acting pumps, mounted like Fig. 276, at the same prices as Fig. 278.

FIG. 278—Sizes and Prices.

No.	Size of Pipe. Inches.	Diam. Cylinder. Inches.	Stroke. Inches.	Capacity per Rev. Gallons.	IRON.		BRASS CYLINDER.	
					Cipher.	Price.	Cipher.	Price.
1	1	2	8	1–5	Betony	$39.00	Bevy	$ 51.00
2	1¼	2½	8	1–3	Betray	41.00	Bewail	56.00
3	1½	3	8	1–2	Betroth	45.00	Beware	62.00
4	2	3½	8	6–7	Betwix	51.00	Bewilder	81.00
5	2	4	8	7–8	Bevel	63.00	Bewitch	114.00
6	2	4½	8	1	Beverage	80.00	Bezant	155.00

For Gun-Metal Valves on Nos. 4, 5, or 6, add to list (Bias), ... $10.00
For Iron Cock, with Brass Plug, add to list (Bible), ... 2.50
For All Brass Cock, add to list (Bidden), ... 5.00



Brass Double-Cylinder Force Pump.

For House or Ship Use.

FIG. 328.

The annexed cut represents our Two-Cylinder Ship and House Force Pump. It is durable and well arranged in all its parts, having an exceedingly perfect adaptation for its work. Among the many points that will commend it to the trade and practical pump men, are the vertically working double pistons and nearly horizontal working-lever; while it combines compactness with great capacity. Brass plugs are provided at all necessary points for entirely emptying the pump of water in cold weather. The discharge tube is brass, screwed for iron pipe or for soldering on brass or copper pipe, and held in place by a union-nut coupling. The cylinders, rods, stuffing-glands and air-chamber are all brass.

FIG. 328—Size and Price.

Number.	Fitted for Pipe. Inches.	Diam. Cyl. Inches.	Capacity per Revolution. Gallons.	Cipher.	Price.
2	1¼	2½	3-10	Bifold	$35.00

Rumsey's "Terror."

A Horizontal Double-Acting Pump of Supreme Excellence.

FIG. 652.

The accompanying engraving is an illustration of our new Horizontal Double-Acting Force Pump. This pump contains all modern improvements, such as vertical suction, double discharges, bronze rod and stuffing-gland, lever stop to prevent the straining of the rod, sliding fulcrum, drip dish, let-off plugs, etc., etc. The removal of two bolts gives access to the valve system. The removal of the cylinder-head gives easy access to the piston and all working-parts of the pump. It is made on the interchangeable system so that repairs to supply breakages will replace the broken parts with certainty.

FIG. 652—Size and Price.

No.	Suction. Inches.	Discharge Inches.	Diam. of Cyl. Inches.	Stroke. Inches.	Capacity per Rev. Gallons.	IRON.		BRASS-LINED CYL.	
						Cipher.	Price.	Cipher.	Price.
1	1	1	2½	5	1–5	Bigamy	$16.00	Bigot	$18.00

"Excelsior" Horizontal Double-Acting Ship Pump.

With Copper-Lined Cylinder, Adjustable Lever, Metallic Valves, Etc.

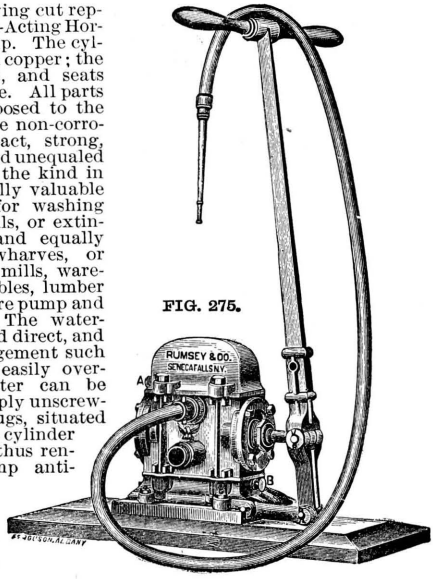


FIG. 275.

The accompanying cut represents our Double-Acting Horizontal Force Pump. The cylinder is lined with copper; the piston-rod, valves, and seats are made of bronze. All parts of this pump exposed to the action of water are non-corrosive. It is compact, strong, simple, durable and unequaled by any pump of the kind in use. It is especially valuable on board ships for washing decks, wetting sails, or extinguishing fires; and equally invaluable on wharves, or around factories, mills, warehouses, livery stables, lumber yards, etc., for a fire pump and other purposes. The waterways are large and direct, and its general arrangement such that it can be easily overhauled. All water can be drawn out by simply unscrewing the let-off plugs, situated at each end of the cylinder for this purpose, thus rendering the pump anti-freezing in the coldest latitudes. All the valves can be examined and removed, if necessary, by taking off the brass nuts of the four bolts holding all the parts together. A priming plug is placed at the upper back end of the cylinder, enabling the cylinder to be lubricated, or the valves primed when required. All appurtenances for fitting, etc., go complete with each pump. Arranged for hose, and lead or iron pipe connections.

Prices quoted below do not include hose.

FIG. 275—Sizes and Prices.

No.	Suction. Inches.	Discharge Inches.	Diam. of Cyl. Inches.	Stroke. Inches.	Capacity per Rev. Gallons.	IRON.		BRASS CYLINDER.	
						Cipher.	Price.	Cipher.	Price.
1	1¼	1¼	3	5	3–10	Bigotry	$28.00	Bilious	$ 58.00
2	2	2	4	5	1–2	Bijou	32.00	Billiards	60.00
3	2½	2	5	5	85–100	Bilbo	35.00	Billion	90.00
4	2½	2½	6	5	1 2–10	Bilge	45.00	Bilman	120.00

New Style Horizontal Double-Acting Ship Pump.

For Washing Off Decks, Wetting Sails, Extinguishing Fires, Etc.

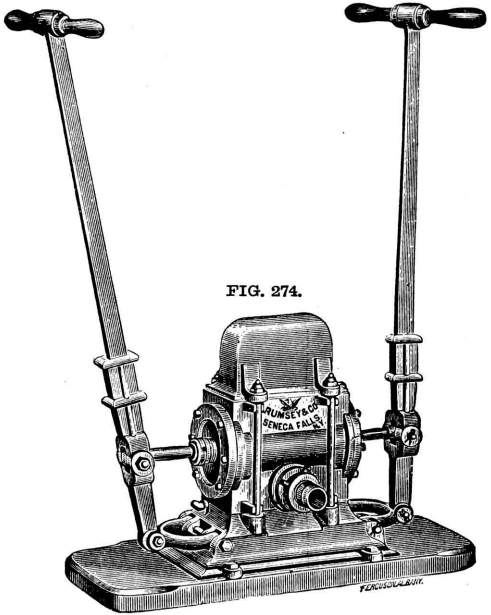


FIG. 274.

The above cut represents our Horizontal Double-Acting Ship Pump, It is very useful for elevating large quantities of water from wells or reservoirs, and the most convenient pump of the class ever invented for use on shipboard as a force pump for washing decks, extinguishing fires, etc. All parts exposed to the action of salt water being made non-corrosive, it is peculiarly adapted for vessels making long voyages.

FIG. 274—Sizes and Prices.

No.	Suction. Inches.	Disch'ge. Inches.	Diam. Cylinder. Inches.	Stroke. Inches.	Capacity. per Rev. Gallons.	IRON.		BRASS CYLINDER.	
						Cipher.	Price.	Cipher.	Price.
1	2½	2	5	5	85–100	Bimanous	$45.00	Binocular	$ 95.00
2	2½	2½	6	5	1 2–10	Binary	55.00	Binnacle	125.00

The "Monarch"—Horizontal Double-Acting Force Pump.

FIG. 660.

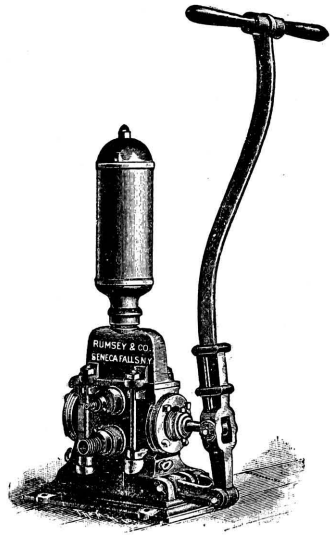


Fig. 660 represents a modification of Fig. 275. The air-chamber has been greatly increased in size, so that the pump throws a very steady and powerful stream. It is designed to take suction and to discharge on either side. It is especially useful as a spraying pump, We make but one size: Cylinder 3 inches by 5 inches; suction 1¼-inch; discharge 1-inch. The suction and discharge are fitted with brass hose connections. Valves and valve seats all brass.

FIG. 660—Prices.

Iron (Biped),	$ 28.00
Brass Cylinder (Birchen),	58.00
All Brass (Birdcage),	120.00

Rumsey Double-Acting Thresher Force Pump.

For Filling Thresher Wagon Tanks for Boiler Supply.

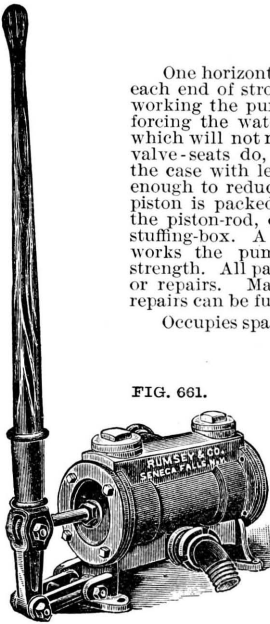


FIG. 661.

DESCRIPTION.

One horizontal pumping cylinder taking water at each end of stroke, thus the whole force exerted in working the pump is usefully applied to raising and forcing the water. Bronze valves and valve-seats, which will not rust and stick fast as iron valves and valve-seats do, nor become stiff and useless as is the case with leather valves. Water-ways are large enough to reduce friction to the lowest point. The piston is packed with double crimped leather, and the piston-rod, of rustless steel, works in a bronze stuffing-box. A long wood lever, easily detachable, works the pump with the least expenditure of strength. All parts are easy of access for examination or repairs. Made on the interchangeable system, repairs can be furnished at a minimum price.

Occupies space 9 x 20 inches.

EMPLOYMENT.

For filling thresher wagon tanks for boiler supply, draining cellars, cess-pools, and barnyards, irrigation, cleaning out boilers, washing windows and wagons, spraying fruit trees and vegetation, and for fire protection.

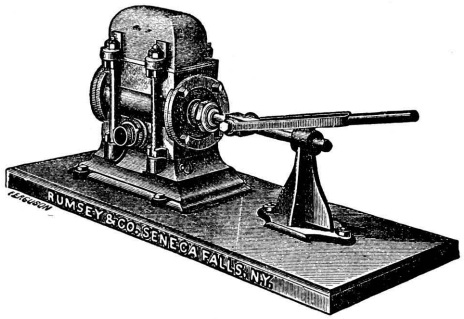
FIG. 661—Size and Price.

Number.	Suction and Disch. Hose. Inches.	Diameter Cylinder. Inches.	Stroke. Inches.	Capacity per Rev. Gallons.	Cipher.	Price.
1	2	5	5	85–100	Birdseye	$18.00

Horizontal Double-Acting "Excelsior" Force Pump.

With Wrought-Iron Pitman, Bronze Rod and Guide.

FIG. 314.



The above cut represents our "Excelsior" Force Pump, fitted with wrought-iron pitman and bronze guide and rod, for attaching to power. For a more complete description of the general construction of this pump, see Fig. 275. This is an excellent arrangement for filling tanks or for fire purposes, and is also extensively in use at railway watering-stations, for operating by horse-power. It can safely be run at 50 revolutions per minute, and in cases of emergency at a much higher rate of speed. Fitted for gas pipe unless otherwise ordered. The iron pumps have copper-lined cylinders. An iron wrench, fitting all nuts, stuffing-gland, and hose couplings, accompanies each pump.

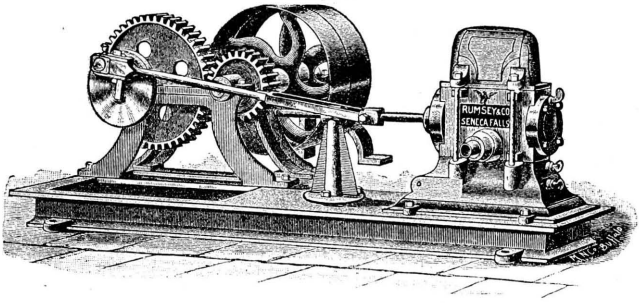
FIG. 314—Sizes and Prices.

No.	Suction. Inches.	Discharge. Inches.	Diam. of Cylinder. Inches.	Stroke. Inches.	Capacity per Rev. Gallons.	IRON.		BRASS CYLINDER.	
						Cipher.	Price.	Cipher	Price.
1	1¼	1¼	3	5	3–10	Birth	$30.00	Bishop	$ 60.00
2	2	2	4	5	1–2	Birthday	32.00	Bismuth	62.00
3	2½	2	5	5	85–100	Biscuit	47.00	Bison	91.00
4	2½	2½	6	5	1 2–10	Biscet	50.00	Bistre	123.00

Horizontal Double-Acting "Excelsior" Suction and Force Pump.

With Crank-Shaft and Pulleys. For Power.

FIG. 316.



The cut shows another adaptation of our "Excelsior" Force Pump for running by power from the belt. This is the most complete and compact pump of the kind yet placed upon the market, and has no superior in point of construction. It is mounted on iron bed-plate, with crank and turned light and loose pulleys. All the valves are easily accessible by unscrewing the bolts and lifting off the air-chamber, without disturbance to the suction pipe. The pump is provided with brass plugs for emptying it in cold weather. The counter-shaft is made of sufficient length to take a hand-crank, and is supported by strong bearings, lined with anti-friction metal. The piston-rod, valves, and valve-seats are all of gun metal, and all parts of the pump liable to wear are made extra heavy strong, to sustain severe and continued labor of long duration. They can be run from 40 to 80 revolutions per minute. If not otherwise ordered, we fit them for wrought-iron pipe connections, but when desired we arrange them for either hose or lead pipe without extra charge. For forcing water through hose for extinguishing fires, or for all general purposes and uses to which a pump of this class is adaptable, we can confidently recommend it in the highest terms.

FIG. 316—Sizes and Prices.

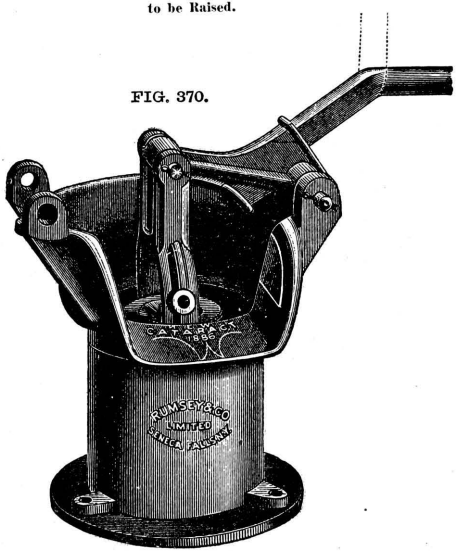
No.	Suction. Inches.	Discharge. Inches.	Diam. of Cylinder. Inches.	Stroke. Inches.	Capacity per Rev. Gallons.	IRON.		BRASS CYLINDER.	
						Cipher.	Price.	Cipher.	Price.
1	1¼	1¼	3	5	3–10	Bitten	$ 70.00	Bizarre	$100.00
2	2	2	4	5	1–2	Bitumen	75.00	Blab	115.00
3	2½	2	5	5	85–100	Bivalve	100.00	Blacken	155.00
4	2½	2½	6	5	1 2–10	Bivouac	115.00	Blackleg	189.00

An iron wrench, fitting all nuts, stuffing-gland, and hose coupling, goes with each pump.

New Style, 1886. "Cataract." Perfection of Low-Priced Pumps.

For Contractors, Mines, Quarries, Barges, Vessels, and All Purposes where Large Quantities of Water have to be Raised.

FIG. 370.



The cylinder is lined with heavy copper.

The valves are faced with pure gum rubber, and are so arranged that they can be readily withdrawn for the purpose of sounding, or for repairs.

The lever is so arranged that it can be used horizontally or vertically.

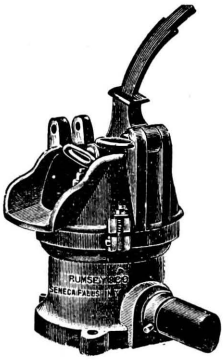
FIG. 370—Sizes and Prices.

Number.	Suction. Inches.	Diameter. Cylinder. Inches.	Stroke. Inches.	Capacity per Revolution. Gallons.	Cipher.	Price.
1	2½	6	4½	½	Blade	$20.00
2	3	8½	6½	1½	Blamed	25.00

Rumsey Diaphragm Pump.

FIG. 513.

Bottom Suction.



Side Suction.

Especially adapted for use on railroads and vessels, and by contractors for freeing sewers, foundations, pipe trenches, etc., of water, sewage, or other accumulations. Will discharge matter containing sand, gravel, coal dust, tar, mud, drainage, grain, and other mixtures. It is frictionless and non-chokable. Has heavy wrought-iron handle, only partially shown in cut. Diaphragm of best Para rubber. Extra diaphragms can be furnished at trifling expense.

FIG. 513—Sizes and Prices.

Without Hose.

Bottom Suction. 12½-inch Diaphragm, 3-inch Iron Suction, ...	$40.00
Side Suction. 12½-inch Diaphragm, 3-inch Hose Suction, ...	43.00

Suction hose furnished with strainer attached, when so ordered, at lowest market price.

Improved Close-Top Two-Cylinder Force Pump.

For Steamboats, Factories, Railroads, Etc.

FIG. 261.

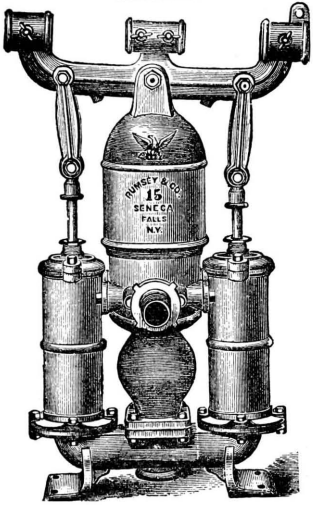


Fig. 261 represents our newly Improved Close-top Two-Cylinder Force Pump. It combines advantages contained in no pump made by any other manufacturer. We now construct it with a vacuum-chamber on the suction, which is cast in one piece with the discharge air-chamber, and bolted to the bed-plate directly under the air-chamber; thus combining two highly valuable additions, viz.: A strong support to the air-chamber, and a *cushion of air* to receive the shock of the ascending column of water, which otherwise would expend its force upon the suction valves and soon render them useless. Rubber buffers have also been added to ease the concussion from the beam at the termination of the stroke. It contains brass-cased piston-rods, with valves and stuffing-glands of brass. It is scientific in principle, simple in construction and action, and not liable to get out of order. The water passages are large and direct, and nothing throughout its construction has been omitted in material or workmanship that would bring it to a higher standard of perfection than has ever before been attained in force pumps. With each pump we furnish two wooden levers of ample length and strength to work it to the fullest capacity. We also make it with iron "folding brakes," like Fig. 172; the brakes being of ample length for eight or ten men to work.

FIG. 261—Sizes and Prices.

No.	Suction Pipe. Inches.	Discharge Hose. Inches.	Diam. Cylinder. Inches.	Stroke. Inches.	Capacity per Rev. Gallons.	IRON.		BRASS CYLINDER.	
						Cipher.	Price.	Cipher.	Price.
1	1¼	1¼	3	6	1–3	Blanched	$ 40.00	Blasted	$ 60.00
2	2	1½	4	6	2–3	Bland	55.00	Blazon	80.00
3	2½	2	5	6	1	Blanket	70.00	Bleach	95.00
4	3	2	6	6	1 4–10	Blarney	100.00	Bleak	155.00

Iron Folding Brakes, extra $20.00 to list.

Open-Top Two-Cylinder Force Pump.

For Steamboats, Sailing Vessels, Factories, Wharves, Etc. With Wooden Levers.

FIG. 151.

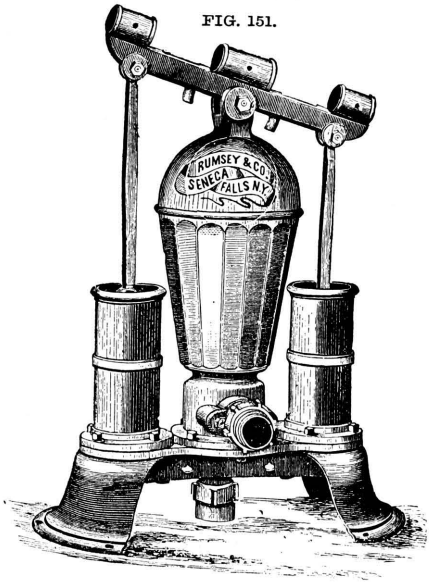


Fig. 151 but inadequately represents our Double-Acting Force Pump. Rubber buffers on each side of the air-chamber receive the blow of the walking-beam in its downward stroke. It is specially desirable where a perfectly reliable deck pump is wanted on steam or sailing vessels, or as a stationary fire engine in factories, etc.

FIG. 151—Sizes and Prices.

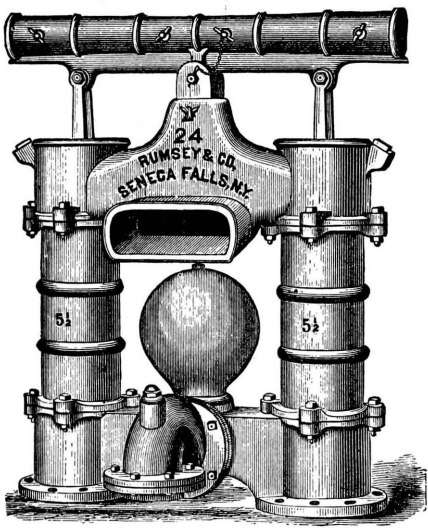
Number.	Suction. Inches.	Discharge. Inches.	Diam. Cyl. Inches.	Stroke. Inches.	Capacity per Rev. Gallons.	IRON.		COPPER-LINED CYLINDER.		BRASS CYLINDER.	
						Cipher.	Price.	Cipher.	Price.	Cipher.	Price.
1	1½	1½	3	6	1–3	Bleats	$35.00	Blew	$42.00	Blister	$ 45.00
2	2	2	4	6	2–3	Blemish	40.00	Blighted	47.00	Blithe	55.00
3	2½	2½	5	6	1	Blending	55.00	Blindly	69.00	Blockade	80.00
4	3	3	6	6	1 4–10	Blessed	75.00	Blissful	91.00	Bloody	105.00

Fitted with Iron Folding Brakes, extra list $20.00.

"Eagle" Ships Main and Bilge Pump.

With Wood Levers.

FIG. 262.



The above cut shows our Fig. 262, designed for wooden levers, which go with each pump, and are arranged to be worked by 2, 4, or 6 men. The upper and lower boxes are made of brass. The drop-bucket or lower box is encased in a brass chamber, or reservoir, thereby preventing rusting, and is always *primed*. It has reversible top, rubber buffers, and all improvements and appliances for easy and successful operation. The care we exercise in the construction of these pumps is shown by the fact that over one thousand of them have been set and worked on vessels of different nationalities, without an instance of failure. Each cylinder will work independently of the other.

FIG. 262—Sizes and Prices.

No.	Suction Pipe. Inches.	Diam. Cylinder. Inches.	Stroke. Inches.	Capacity per Rev. Gallons.	IRON.		COPPER-LINED CYL.	
					Cipher.	Price.	Cipher.	Price.
1	3	5	8	1 1–3	Blooming	$ 55.00	Blueness	$ 75.00
2	3	5½	8	1 2–3	Blossom	60.00	Bluff	80.00
3	3	6	8	1 9–10	Blown	70.00	Blundered	90.00
4	4	8	8	3 4–10	Blubber	130.00	Blunt	160.00

"Eagle" Ships Main and Bilge Pump.

With Wrought-Iron Extension Brakes.

We are willing to leave the question of the superiority of this pump to seafaring men who have so extensively used it. We show it here with wrought-iron extension levers, enabling it to be manned by a large number of hands. All pieces are interchangeable. The parts exposed to the action of salt water are non-corrosive. It is made anti-freezing, and is always primed. It is provided with extra packings, and all tools go with it complete, to set it up and overhaul it at sea. The water-ways are large and direct, and it will not choke with molasses, sugar drainings, grain, or similar substances, often found in the bilge of vessels.

At a competitive trial in New York City, this pump, with 5½-inch cylinders, proved victorious over all others; two men filling a 650-gallon cask in 9 minutes, raising the water to an elevation of 20½ feet.

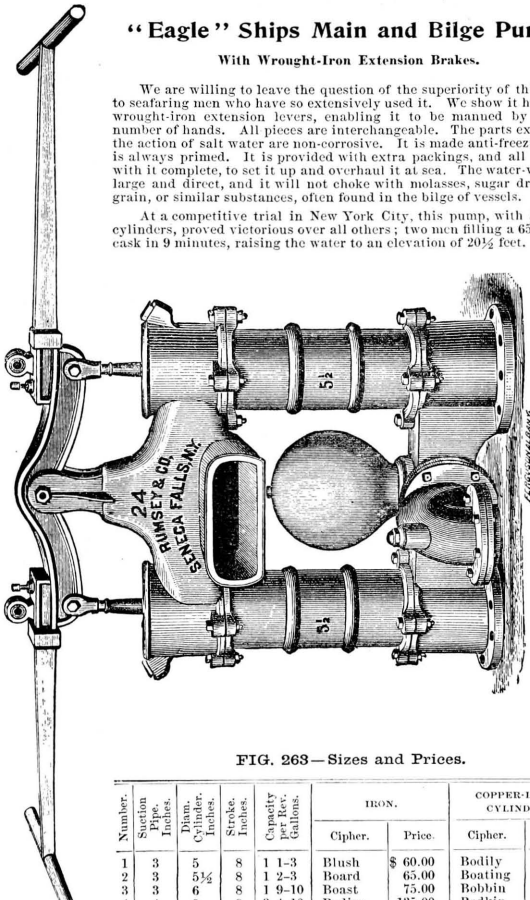
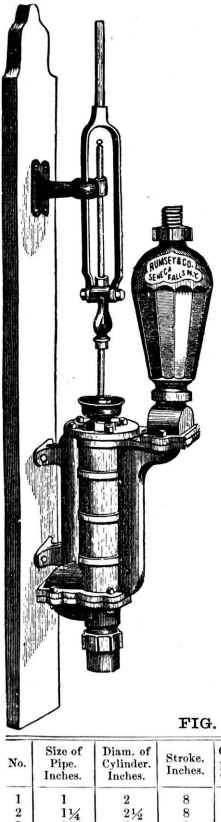


FIG. 263.

FIG. 263—Sizes and Prices.

Number.	Suction Pipe. Inches.	Diam. Cylinder. Inches.	Stroke. Inches.	Capacity per Rev. Gallons.	IRON.		COPPER-LINED CYLINDER.	
					Cipher.	Price.	Cipher.	Price.
1	3	5	8	1 1-3	Blush	$ 60.00	Bodily	$ 80.00
2	3	5½	8	1 2-3	Board	65.00	Boating	85.00
3	3	6	8	1 9-10	Boast	75.00	Bobbin	95.00
4	4	8	8	3 4-10	Bodice	135.00	Bodkin	165.00



Double-Acting Railroad Force Pump.

Mounted on Plank. For Power.

FIG. 157.

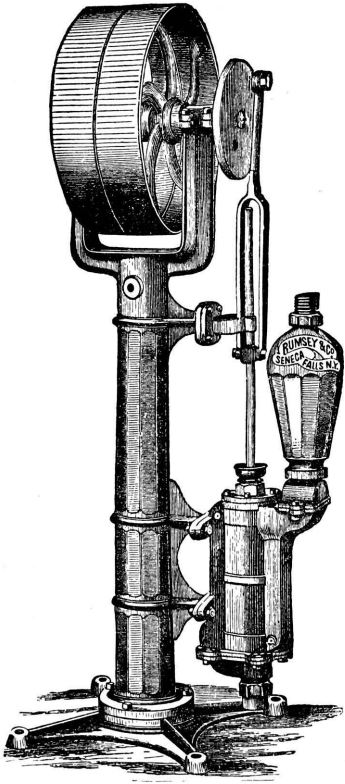
Fig. 157 represents a very efficient Double-Acting Force Pump, fitted for attaching to a crank driven by machine power. This pump is made in the most thorough and workmanlike manner, both in principles and construction. It has an unusually large solid brass rod with a heavily forged pitman attached; and all parts are firmly bolted through strong flanges, effectually preventing the possibility of leakage at any point. The air-chamber can have one or two outlets, at the option of the purchaser.

For all places where a constant and rapid supply of water is required, we can unhesitatingly recommend it as a first-class pump in every respect; and for steady and uniform action while in operation, it is unexcelled. It is admirably calculated for being driven by power, without the use of a balance wheel to regulate its motion. We furnish counter-shaft, crank, pulleys or gears, hangers, post-boxes, and pitman-heads for driving this pump at but a trifling advance on cost of labor and material. It is in extensive use in tanneries, factories, etc., and also for wind-mill power.

FIG. 157—Sizes and Prices.

No.	Size of Pipe. Inches.	Diam. of Cylinder. Inches.	Stroke. Inches.	Capacity per Rev. Gallons.	Revolut'ns per Minute.	IRON.		BRASS CYLINDER.	
						Cipher.	Price.	Cipher.	Price.
1	1	2	8	1-5	80	Boldly	$ 17.50	Bonnet	$ 30.00
2	1¼	2½	8	1-3	75	Boldface	21.00	Boorish	39.00
3	1½	3	8	1-2	70	Bolster	25.00	Borax	52.00
4	2	3½	8	6-7	60	Bolus	30.00	Border	74.00
5	2	4	8	7-8	50	Bombard	44.00	Boreal	99.00
6	2	4½	8	1	50	Bombyx	58.00	Borne	142.00
7	2½	5	8	1 1-3	40	Bondage	80.00	Borough	170.00
8	3	6	8	2	40	Bonfire	100.00	Borrower	200.00

For Gun-Metal Valves for Nos. 4, 5, and 6, add to list (Bosky), ... $10.00
" " " " 7 and 8, add to list (Bosk), ... 15.00



Iron Column Force Pump.

With One Double-Acting Force Pump.

FIG. 159.

Fig. 159 represents an iron column, having countershaft, crank, tight and loose pulleys, wristpin and pitman, with one double-acting force pump, like Fig. 157, attached and ready for use. This is the most complete, substantial and compact *power force pump* in use, requiring comparatively no labor or expense to set up ready for action, having simply to be bolted down to the floor, when it is ready for connecting the pipes and applying the belt for use. In all respects it is the simplest and best device of the kind yet placed upon the market. The pulleys are 20 inches in diameter, and have 4½ inches face. The pitman-head has gib and key connections, similar to the "stub ends" of steam engines. A boiler-feeding pump can be attached instead of the double-acting pump — an arrangement that will commend itself to engineers of stationary engines. Each pulley is provided with set-screws, so that both may be made "tight," if necessary.

FIG. 159—Sizes and Prices.

No.	Size of Pipe. Inches.	Diam. of Cylinder. Inches.	Stroke. Inches.	Capacity per Rev. Gallons.	Revolut'ns per Minute.	IRON.		BRASS CYLINDER.	
						Cipher.	Price.	Cipher.	Price.
1	1	2	8	1–5	80	Bosom	$ 70.00	Boudoir	$ 86.00
2	1¼	2½	8	1–3	75	Botany	75.00	Bout	89.00
3	1½	3	8	1–2	70	Botchery	85.00	Bounce	106.00
4	2	3½	8	6–7	60	Bothered	100.00	Boundary	114.00
5	2	4	8	7–8	50	Bottle	120.00	Bounden	172.00
6	2	4½	8	1	50	Bottom	140.00	Boundless	224.00

For Gun-Metal Valves for Nos 4, 5, and 6, add to list (Bouquet), . . . $10.00.

Double Geared Iron Column.

With Tight and Loose Pulleys, and Outside Bearings.

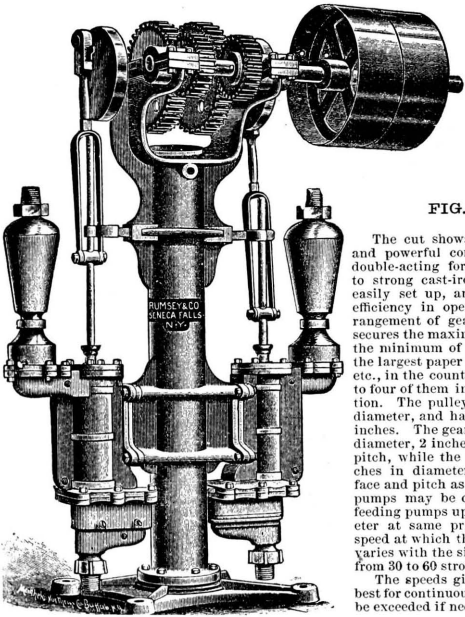


FIG. 260.

The cut shows a very compact and powerful combination of two double-acting force pumps bolted to strong cast-iron column, being easily set up, and of the highest efficiency in operation. Our arrangement of gearing and pulleys secures the maximum of work with the minimum of power. Many of the largest paper mills, distilleries, etc., in the country have from one to four of them in successful operation. The pulleys are 18 inches in diameter, and have a belt face of 6 inches. The gears are 12 inches in diameter, 2 inches face and 1 inch pitch, while the pinions are 6 inches in diameter, with the same face and pitch as the gears. These pumps may be changed to boiler-feeding pumps up to 4 inches diameter at same prices. The proper speed at which they should be run varies with the size of the pump—from 30 to 60 strokes per minute.

The speeds given below are the best for continuous service, but may be exceeded if necessary.

FIG. 260—Sizes and Prices.

No.	Size of Pipes. Inches.	Diam. Cylinder Inches.	Stroke. Inches.	Capacity per Rev. Gallons.	Rev. per Minute.	IRON.		BRASS CYLINDER.	
						Cipher.	Price.	Cipher.	Price.
1	1½	3	8	1	70	Bourgeois	$130.00	Bowman	$186.00
2	2	3½	8	1 5-7	60	Bovine	165.00	Bowsprit	244.00
3	2	4	8	1 3-4	50	Bowel	200.00	Bowstring	282.00
4	2	4½	8	2	50	Bowery	230.00	Boxer	360.00
5	2½	5	8	2 2-3	40	Bowlder	280.00	Boyhood	450.00
6	3	6	8	4	40	Bowline	360.00	Boyish	550.00

For pumps fitted with Gun-Metal Valves, add to list (Boyism) $10.00.

Pressure Pump.

For Hydraulic Pulp Grinders.

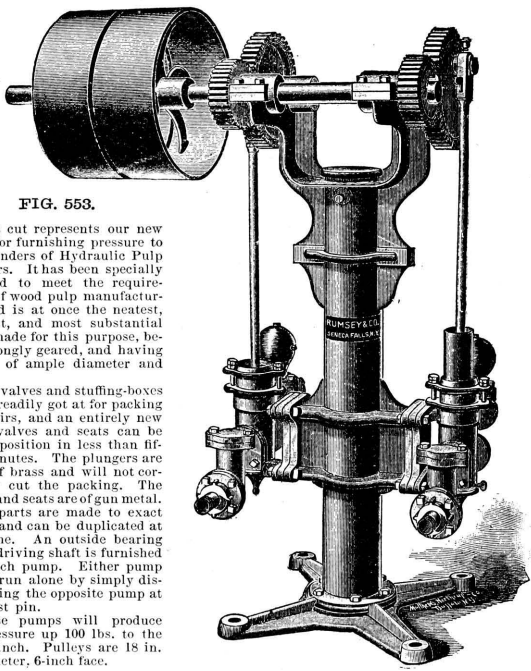


FIG. 553.

This cut represents our new pump for furnishing pressure to the cylinders of Hydraulic Pulp Grinders. It has been specially designed to meet the requirements of wood pulp manufacturers, and is at once the neatest, cheapest, and most substantial pump made for this purpose, being strongly geared, and having pulleys of ample diameter and face.

The valves and stuffing-boxes can be readily got at for packing or repairs, and an entirely new set of valves and seats can be put in position in less than fifteen minutes. The plungers are made of brass and will not corrode or cut the packing. The valves and seats are of gun metal.

All parts are made to exact gauges and can be duplicated at any time. An outside bearing for the driving shaft is furnished with each pump. Either pump can be run alone by simply disconnecting the opposite pump at the wrist pin.

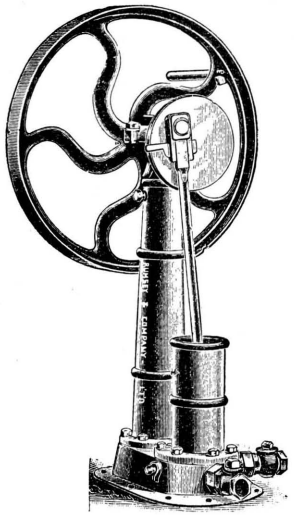
These pumps will produce any pressure up 100 lbs. to the square inch. Pulleys are 18 in. in diameter, 6-inch face.

FIG. 553—Size and Price.

No.	Stroke. Inches.	Diam. Cylinder. Inches.	Capacity per Rev. Gallons.	Revolutions per Minute.	Ratio of Gears.	Cipher.	Price.
1	6	3	1-3	30 to 60	2 to 1	Boycott	$150.00

Rumsey's Air Compressor and Vacuum Pump.

FIG. 386.



This pump can be operated by either hand or power, and a pressure of eighty or more pounds is easily maintained by one man. The pump may be arranged for vacuum as well as pressure.

Made in one size only. Diameter of cylinder, 4 inches; stroke, 5 inches; capacity per revolution, 62 cubic inches.

Price (Bracelet), ... $50.00

Double-Acting Pacific Railroad Force Pumps.

Arranged for Hand or Power.

The following Figs. 171, 279, 172, and 173, represent styles of our Double-Acting Force Pumps, designed especially for the use of railroad corporations, distillers, paper mills, etc., or for other parties who require a very powerful, substantial, and reliable pump to raise a large quantity of water for fire protection or other purposes.

These pumps are handsome in design and so arranged with regard to strength and compactness that any danger of accident or breakage is reduced to a minimum, while at the same time they occupy the smallest space consistent with the necessary strength.

These pumps are so constructed that all parts are easy of access in case of necessity. All the valves are bronze with a rubber facing, and are best variety of poppet valve. The valve-seats are also of bronze, screwed in, and can be readily taken out and replaced at any time by simply removing the face-plate, without disturbing any other part of the pump. The suction and discharge pipes can be attached or detached without any trouble, as all the joints are in plain sight on the front of the pump. The piston-rod is of gun metal, with solid cross-head. The cylinders are bored and polished equal to any steam engine cylinder. The stuffing-box is surrounded by an oil or water chamber, which prevents the admission of air into the pump on the downward stroke. It will, therefore, be readily seen that these pumps combine the necessary attributes to make them always perfect double-acting force pumps.

Pumps with 3, 4, 5, and 6-inch cylinders, and 8-inch stroke, should be run 50 to 75 strokes per minute. Those with 4, 5, 6, 7, and 8-inch cylinders, 14-inch stroke, should be run 40 to 45 strokes per minute.

We make larger sizes of above for power, when ordered. We also furnish wrought and cast-iron suction pipes, hose, discharge pipes, etc., when ordered.

Fig. 171 shows a pump arranged for hand-power. Fig. 172 represents the same pump with folding brakes. Fig. 279 is adapted for machine power. Fig. 173 shows the manner in which Fig. 279 is connected to power-crank and main shaft. We can furnish all the necessary gearing, counter-shafts, crank-plates, hangers, etc., for Fig. 173 at reasonable rates and upon short notice—only requiring to know the speed of the main shaft from which the pump is to be run. See Figs. 304 and 305.

Double-Acting Pacific Railroad Force Pump.

FIGS. 279, 171, 172, 173—Sizes and Prices.

Fig. 279. Cipher, . . Bracing. Fig. 171. Cipher, . . Bracket.
Fig. 172. Cipher, . . Brackish. Fig. 173. Cipher, . . Bradawl.

No.	Size of Pipe. Inches.	Diam. Cylinder Inches.	Stroke. Inches.	Capacity per Rev. Gallons.	IRON.		BRASS-LINED CYLINDER.	
					Cipher.	Price.	Cipher.	Price.
1	1½	3	8	1-2	Braggart	$ 65.00	Branlin	$ 75.00
2	1½	3	10	6-10	Brail	70.00	Brasire	78.00
3	2	4	8	7-8	Brain	75.00	Bravo	79.50
4	2	4	12	1 1-4	Brake	100.00	Bravery	111.00
5	2	4	14	1 1-2	Bramble	110.00	Bravado	125.00
6	2½	5	8	1 1-3	Bramin	90.00	Brassy	110.00
7	2½	5	14	2 2-5	Bran	130.00	Brawler	165.00
8	3	6	8	2	Brancher	110.00	Brawny	135.00
9	3	6	14	3 2-5	Branding	175 00	Braying	215.00
10	4	8	10	4 1-3	Brandy	275.00	Brazen	325.00

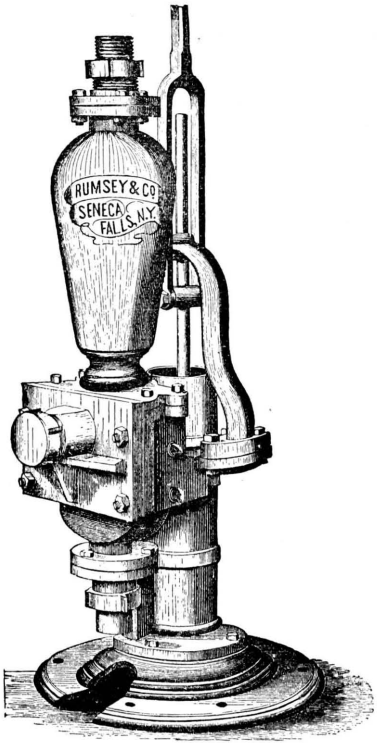
Fig. 172, with folding brakes, extra list, ... $20.00

In using telegraphic code for these pumps, use first the cipher word given above for the Figure, and then the cipher word designating the number and style.

Double-Acting Pacific Railroad Force Pump.

For Machine Power.

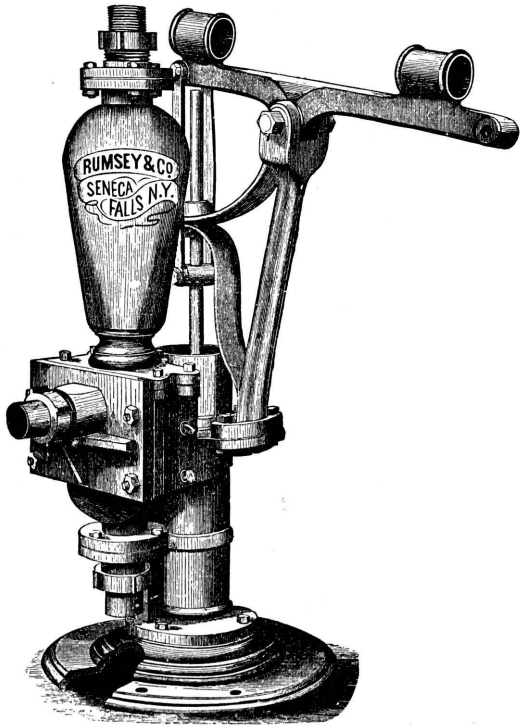
FIG. 279.



Double-Acting Pacific Railroad Force Pump.

For Hand Power.

FIG. 171.



Pacific Railroad Fire Pump.

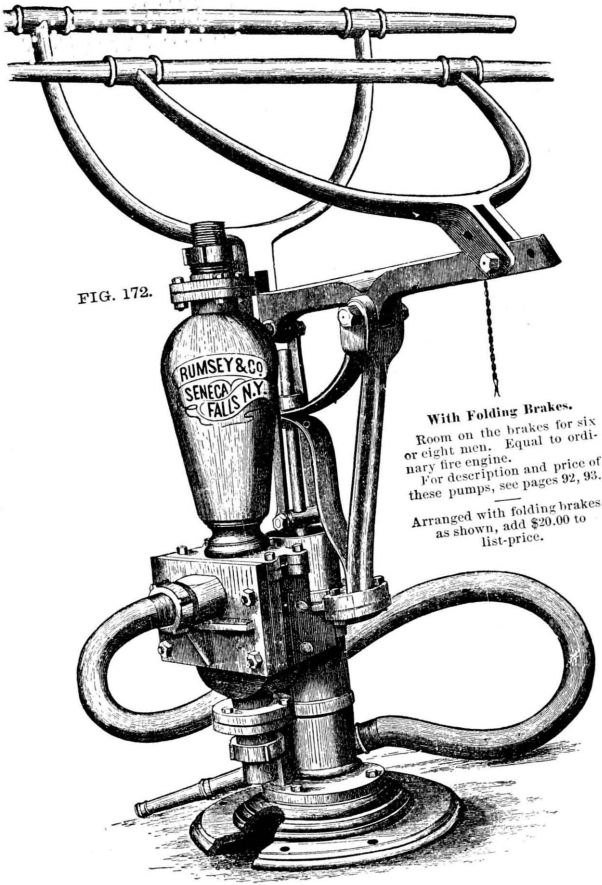


FIG. 172.

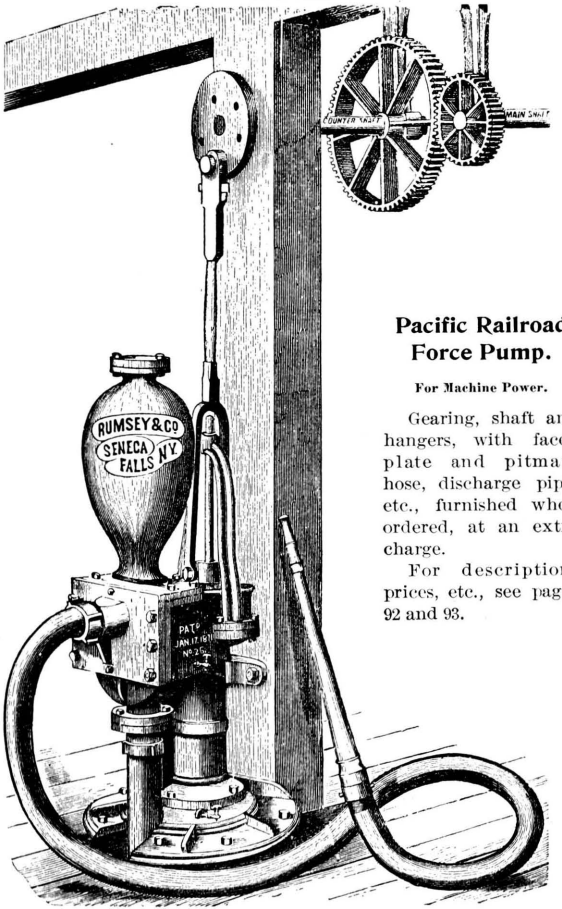
With Folding Brakes.

Room on the brakes for six or eight men. Equal to ordinary fire engine.

For description and price of these pumps, see pages 92, 93.

Arranged with folding brakes, as shown, add $20.00 to list-price.

FIG. 173.



Pacific Railroad Force Pump.

For Machine Power.

Gearing, shaft and hangers, with face-plate and pitman, hose, discharge pipe, etc., furnished when ordered, at an extra charge.

For description, prices, etc., see pages 92 and 93.

Pacific Railroad Force Pump.

Mounted in an Iron Frame, with Gearing, Pulleys, Safety Valve and Valve Gates Complete, as Shown in Cut in Opposite Page.

FIG. 277

This pump with its iron columns, gears, etc., will stand the severest service. It is very heavy and strong—the columns and gears, without the pump, weighing 1200 to 1500 pounds. The pump is made in the most substantial manner, with valve, valve-seats, and piston-rod all of *gun metal*, and in its entire construction embodies all the tested and valuable improvements which can be given by an experience of fifty years in the manufacture of these pumps. The same superior features are combined in its build that are described more fully on page 92, while Fig. 277, from its additional power and peculiar arrangement, is adapted in a greater degree to extremely heavy and severe work. We build the pump complete, as shown, in perfect readiness for bolting down to the floor and attachment of belt to pulley. Set up in a strong iron frame, in any required situation, it has always proved itself thoroughly reliable in every emergency, and for all the various purposes for which it is so widely and favorably known. We put the best workmanship and material into the gearing, etc., as well as the pump, and will guarantee it in every respect as equal, if not superior, to any pump of the class made.

Large mills and factories of every description will find this pump and its arrangements to meet their wants for elevating large quantities of water for consumption, and also for protection against fire, it being fitted for different lines of hose. It has been adopted by railroads in all sections of the country, giving the best satisfaction in results, and is universally acknowledged to be the standard for this class of pumps.

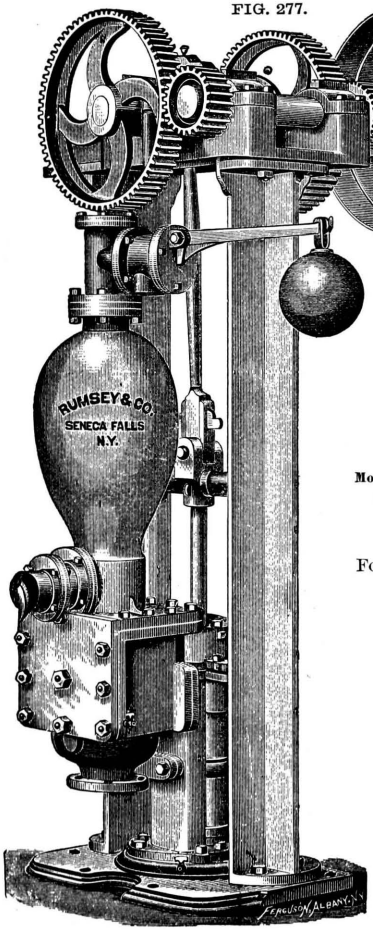
Many villages are also using our Pacific Railroad Force Pumps, mounted as illustrated, for filling reservoirs placed on high elevations, for general supply, and for all needed purposes of fire protection.

FIG. 277—Sizes and Prices.

No.	Size Pipe. Inches.	Diam. Cylinder Inches.	Stroke. In.	Capacity per Rev. Gallons.	Rev. per Minute.	IRON.		BRASS-LINED CYLINDER.	
						Cipher.	Price.	Cipher.	Price.
1	3	6	8	2	55	Bread	$275.00	Brevet	$300.00
2	3	6	14	3 2–5	45	Breast	325.00	Brevier	365.00
3	4	8	10	4 1–3	40	Breed	450.00	Brevity	500.00

We make larger sizes of above when ordered. We also furnish wrought and cast-iron suction pipes, hose, discharge pipes, etc., if so ordered.

FIG. 277.



Pacific Railroad Force Pump.

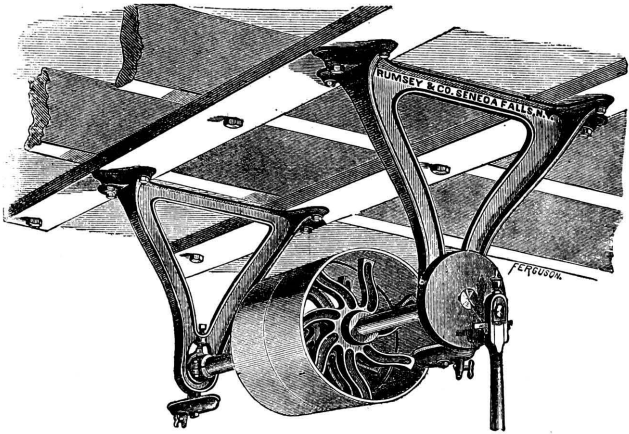
Mounted on an Iron Frame, with Gearing, Pulleys, and Safety Valve, All Complete, as Shown in Cut.

For description and prices, see page 98.

Counter-Shaft.

With Hangers, Crank Plate, Gib and Key Connections, Etc.

FIG. 305.



The above figure represents one of our Counter-shafts, with hangings complete, having gib and key "stub" attached. This is a very strong and convenient arrangement for operating the smaller class of pumps, such as Fig. 366, up to 3-inch cylinder; Fig. 157, up to 3½-inch cylinder; Fig. 287, up to 3 and 3½-inch cylinders.

Special prices will be made on Counter-shafts for operating larger pumps, on receipt of information upon which to base our calculations, such as size of the pump, the work required to be performed, the size and speed of the main shaft, etc.

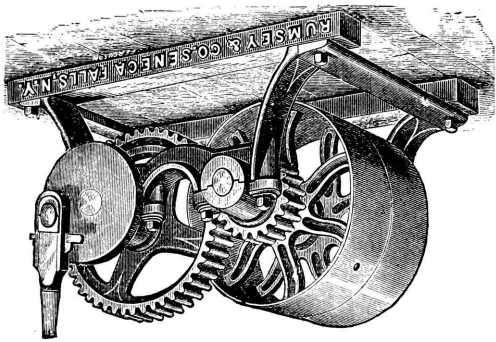
FIG. 305—Size and Price.

Fig. 305, with pulleys 18 inches in diameter and 5-inch face crank-plate, gib and key connections, stub for welding (Brewer), ... $35.00

Power Geared Counter-Shaft.

With Hangers, Crank Plate, Gib and Key Connections, Etc.

FIG. 304.



The accompanying cut represents a strong and powerful Counter-shaft for operating force pumps. They are of ample strength and sufficient power to operate the largest pumps. Pulleys are 18-inch diameter and 4-inch face.

This Counter-shaft is especially adapted for operating pumps like Fig. 157, which may be mounted on a heavy upright wooden beam. We make a cast-iron column for supporting these pumps, which can be bolted to the floor or foundation directly under the Counter-shaft.

FIG. 304—Price.

Counter-shaft as shown in cut (Bribery), ... $50.00

Rumsey Horse-Power Pumping Outfit.

FIG. 554.

This cut shows a very effective and thoroughly constructed horse-power for pumping water, or driving any kind of agricultural machinery.

The balance-wheel is heavy and strong. The pin to which pump-rod is attached works in a slot, and can be adjusted to a pump of any length of stroke. The tumbling-rod can be any length desired. We can furnish horse-powers and pumps for wells of any depth—the price varying with the power required, the depth of the well, and the quantity of water desired. For grinding, irrigation, and the many purposes for which such machinery is suitable on farms, plantations, etc., this power is unexcelled. By adding a jack extra (not shown in cut) any desired increase of speed is given. We can supply all the necessary apparatus for driving pumps, and would respectfully invite correspondence.

ONE HORSE-POWER.

Strictly a one horse-power. On the slow speed, the tumbling-rod makes 7 revolutions, and on the fast speed it makes 23 revolutions to one round of the master-wheel. Weight, 400 pounds.

Price, with one lever, one tumbling-rod, two couplings, and pumping attachment, as shown (Brick), ... $65.00

TWO HORSE-POWER.

When connected with the slow speed, the tumbling-rod makes 6 revolutions, and when connected with the fast speed it makes 21 revolutions to one round of the master-wheel. Weight, 600 pounds.

Price, with two levers, one tumbling-rod, two couplings, and pumping attachment, as shown (Bridal), . . $85.00

FOUR HORSE-POWER.

When coupled to the slow speed, the tumbling-rod makes 10 revolutions, and when coupled to the fast speed it makes 35 revolutions to one round of the master-wheel. Weight, 900 pounds.

Price, with two levers, two couplings, one tumbling-rod and pumping attachment, as shown (Bridge), ... $100.00

Pump, pipe, connecting-rod to work pump, and additional lengths of tumbling-rod are extra.

RUMSEY'S POWER PUMPS

PUMPS FOR

Boiler Feeding,
Fire Protection,
Filling Tanks,
Irrigation,
Drainage,
Hydraulic Elevators,
House Tanks,
Pressure,
Vacuum,
Circulating,
Wrecking,
Mining,
Contractors,
Water Works,
Electric Motors,
Railroad Tanks,
Oil Refineries,
Oil Tanks,
Oil Lines,
Sugar Refineries,
Suction for Paper Machine,
Acids, Alkalies, Chemicals,
Sugar Cane Mills,
Breweries and Distilleries,
Condensers,
Draining Steam Coils,
Paper Mills,
Mash, Alcohol, Etc.,
Stuff Pumps,
Pulp Grinders.

Rumsey's Triple-Cylinder Power Pump— "The Triad."

Figs. 659, 669, and 670 represent our Triple-Cylinder Power Pump. The three plungers working from cranks placed 120° from each other on the same axis, combine to give a practically continuous movement to the fluid pumped; producing a perfectly steady pressure or vacuum as the case may require.

This steadiness of action produces many desirable results. It is very easy on belting, and consequently so on the prime mover. It does not destroy itself by the sudden change of the crank, as in ordinary pumps is likely to be the case, because the strain is a constant one, and the percentage of efficiency is heightened. These features allow the operation of this pump by electric motors, by eliminating the hitherto objectionable features of piston pumps in this service.

In Fig. 659 the three-throw crank is made of best cast-steel, and is made large and heavy to meet all requirements. The boxes are bushed with the best anti-friction metal, and oil cups are provided wherever required. The gears are machine-cut, so as to be noiseless, and to operate with the least friction. The plungers and valves are of bronze, but can be made of any proper metals to meet requirements of pumping acids, alkalies, wines, or waters of any degree of temperature. Proper pet cocks are inserted so all liquid can be drawn off and freezing prevented. The suction and discharge are extra large.

In Figs. 669 and 670 the general features are the same as in Fig. 659, with the exception that the crank is so changed that the bearings are between the center and two outside cranks, thus giving greater strength and rigidity to the pump. We make these pumps with two sets of gears, which makes it a very powerful pump. The extra gears are supplied for extra heavy duty only. We supply these pumps with bronze, rubber, or ball valves as may be required. The plungers are of iron but may be of any other metal.

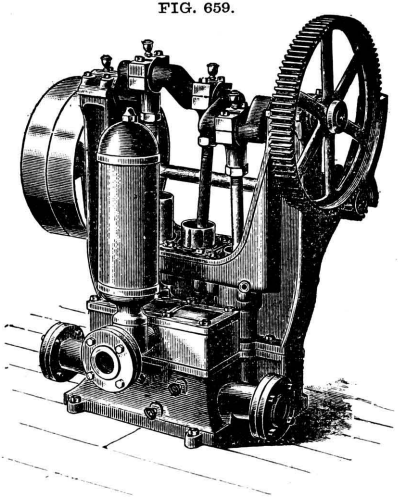
We call especial notice to our packing around the plunger, and guarantee that it will leak less fluid, with less pressure on the gland, than any other.

We particularly recommend these pumps for Electric Motors, Open Tank or Pressure-Tank Hydraulic Elevators, for Paper Mills, for Stuff and Suction Pumps, for Pulp Grinders, for Water Works, for Circulating Pump, for Steam-Heating System, and Boiler Feeding.

We solicit correspondence with those who wish a good Power Pump.

Rumsey's Triplex Pump—"The Triad."

FIG. 659.



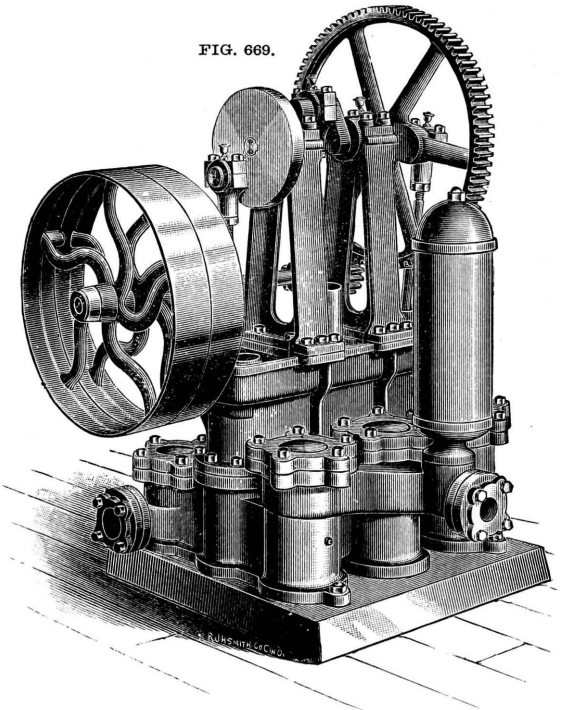
For description, see page 104.

FIG. 659—Sizes and Prices.

No.	Diam. Cyl. Inches.	Stroke. In.	Suction. Inches.	Discharge. Inches.	Geared.	Pulleys. Inches.	Gallons per Rev.	R. M. P. of Crank.	Cipher.	Price.
1	1¼	2	¾	¾	5 to 1	12 x 1½	1–35	50	Cactus	$ 50.00
2	1¾	2½	1¼	1¼	5 to 1	12 x 2½	1–14	50	Cadet	75.00
3	2	3	1¼	1¼	5 to 1	12 x 2½	1–8	50	Caiman	100.00
4	2½	4	1½	1½	5 to 1	15 x 3	1–4	50	Caisson	125.00
5	3	4	1½	1½	5 to 1	15 x 3	1–3	45	Caitiff	140.00

Rumsey's Triplex Power Pump—"The Triad."

FIG. 669.



For description, see page 104.

FIG. 669—Sizes and Prices.

No.	Diam. Cyl. Inches.	Stroke. In.	Suction. Inches.	Discharge. Inches.	Pulleys. Inches.	Gallons per. Rev.	R. M. P. of Crank.	Weight. Lbs.	Cipher.	Price.
6	4	4	2½	2	18 x 3	5–8	45	800	Calabash	$200.00
7	4	6	2½	2	20 x 3½	1	40	860	Calamine	250.00

The above pumps are all geared five to one.

Rumsey's Triplex Power Pump—"The Triad."

FIG. 670.

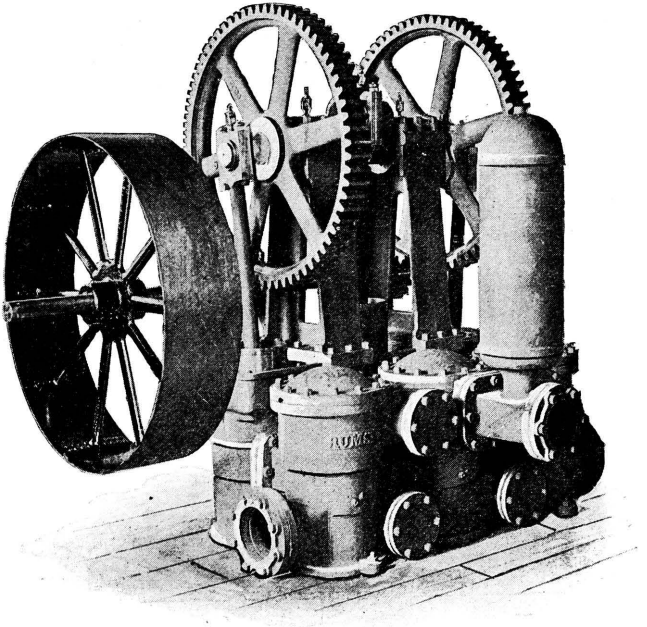


FIG. 670—Sizes and Prices.

Diam. Cyl. Inches.	Stroke. Inches.	Suction. Inches.	Discharge. Inches.	Pulleys. Inches.	Gallons. per Rev.	R. P. M. of Crank.	Approx'ate Weight. Pounds.	Cipher.	Price.
5	6	3½	3	24 x 5	1 1-2	40	1800	Calcspar	$ 330.00
5	8	3½	3	24 x 6	2	40	1950	Calculator	375.00
6	8	4	3½	28 x 7	2 9-10	40	3700	Calculus	490.00
7	8	5	4	28 x 8½	4	40	4600	Calendar	600.00
8	8	6	5	30 x 10½	5 1-4	35	5900	Calibrate	700.00
8	10	6	5	36 x 12½	6 1-2	35	6800	Calico	900.00
9	10	7	6	.....	8 1-4	30	11000	Cabinet	1500.00

The above pumps are all geared for five revolutions of countershaft for one of crankshaft.

Electric House Pump.

FIG. 679.

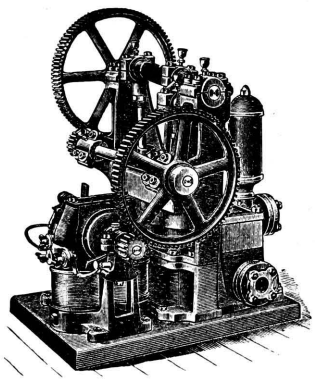


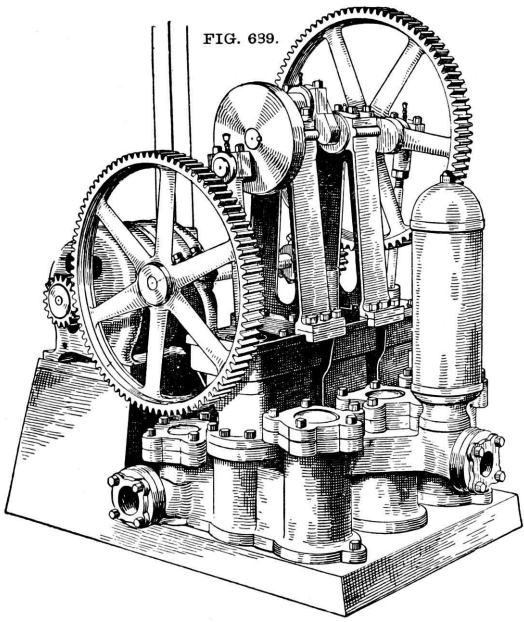
Fig 679 represents our Triplex Electric House Pump. The motor is connected to the pump by means of rawhide pinions, thus rendering the action noiseless. A float-switch provided makes the plant entirely automatic. The pump is the same as our Fig. 659, described on page 104.

FIG. 679—Sizes and Prices.

No. of Pump.	Horse-power of Motor.	Head in Feet.	Rev. per Minute.	Capac'y. Gallons per Minute.	Weights.		Cipher.		Prices.	
					Pump with Direct Current Motor.	Pump with Extra Gears, Etc.	Pump to Receive Direct Current Motor.	Pump with Direct Current Motor.	Pump with Extra Gears and Bed Plate to Receive Motor.	Pump Complete with Direct Current Motor.
1	¼	150	50	1.5	200	125	Caliper	Calumet	$ 91.00	$173.00
2	½	150	50	3.9	320	210	Callous	Calumny	119.00	235.00
3	½	100	50	6.12	390	280	Calm	Calyx	143.00	259.00
4	1	100	50	12.7	610	410	Calomel	Camber	175.00	343.00
5	1	100	45	16.5	770	570	Caloric	Camel	195.00	364.00

Electric Triplex Pumps.

FIG. 639.

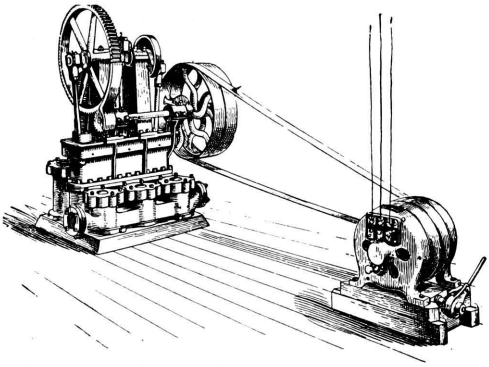


We illustrate in Fig. 689 our larger sizes of Electric Pumps. These plants are designed for heavy service, as waterworks, elevators, sprinkler systems, etc. The pumps are described under the figure numbers 669 and 670. When the work is intermittent an automatic rheostat may be provided. With this device the pump requires no attention other than oiling. Rawhide pinions are used, which makes the action of the pump noiseless.

FIG. 689—Sizes and Prices.

Size of Pump. Inches.		Horse-power of Motor.	Head in Feet.	Rev. per Minute.	Capac'y. Gallons per Minute.	Cipher.		Prices.		
Diam.	Stroke.					Pump to Receive Motor.	Pump with Direct Current Motor.	Pump to Receive Motor.	Pump with Direct Conn. Motor.	Extra for Auto. Rheostat.
4	4	2	200	45	29.5	Cameo	Canker	$ 275.00	$ 504.00	$110.00
4	6	3	250	40	39.5	Camerate	Capable	322.00	528.00	110.00
5	6	5	200	40	61	Camp	Capacity	446.00	831.00	136.00
5	8	5	150	40	80	Campania	Caplin	483.00	868.00	136.00
6	8	5	100	40	117	Camphor	Caprid	634.00	1029.00	136.00
7	8	7	100	40	160	Canaille	Capsize	798.00	1267.00	136.00
8	8	10	150	35	183	Canal	Capture	942.00	1514.00	136.00
8	10	10	100	35	228	Canard	Caraffe	1150.00	1722.00	136.00
9	10	10	100	30	250	Cancel	Cardiac	1834.00	2406.00	136.00

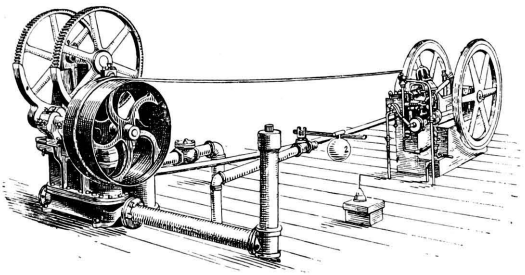
Rumsey's Triplex Power Pump, Driven with Belt from Electric Motor.



We illustrate above one of our Triplex Pumps, driven by means of a belt from an electric motor. Where there are no limitations regarding space, the motor may be set at sufficient distance for belting directly. Where space is limited, a belt-tightener or countershafting may be used; however, under such conditions the arrangement shown on page 108 is preferable.

The pump and motor are the same as we have just described, and may be used for the same service, except where a portable pump is required.

Rumsey's Waterworks Triplex Pump and Gas Engine.



We illustrate a type of waterworks which, for small corporations, is becoming justly popular. The plant shown on the opposite page has been located at Princess Anne, Maryland. A 5 x 8-inch Rumsey Triplex Pump is used in connection with a gasoline engine. The first cost and the cost of maintenance are low, practically no attendance being required.

Suction Box Vacuum Pump.

FIG. 675.

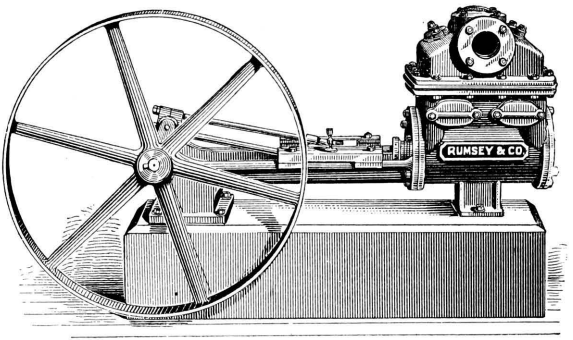


Fig. 675 shows our Vacuum Pump for Paper Machine Suction Boxes. To maintain a steady vacuum an automatic air-valve is provided, having an adjustment, so that any desired vacuum may be carried. The valves on ends of caps are kept closed unless the pump fills only on one end of cylinder; by opening either valve, the corresponding end of the cylinder is primed, equalizing the work of the piston.

The valves are of the best soft rubber. The valve-seats, bolts, and springs, are of gun metal. The cylinder has a gun metal liner easily replaced when worn. The piston-rod is of best Tobin bronze. The piston is fitted with square hemp packing. The general excellence of both material and workmanship ensures an efficient pump, as well as the least expense for repairs. Enquiries about this pump should be accompanied by full details regarding the service required. Prices quoted upon application.

FIG. 675—Sizes and Prices.

Diam. Cylinder. Inches.	Stroke. Inches.	Rev. per Minute.	Size of Pipes. Inches.	Pulley. Inches.		Cipher.	Price.
				Diam.	Face.		
8	10	30	3	48	3 1/8	Coach	.....
10	10	30	4	48	4 1/4	Coadjust	.....
12	10	30	5	48	6 1/4	Coarse	.....
14	10	30	6	48	8 1/2	Cobalt	.....
16	16	30	8	60	10 1/2	Cobbler	.....

Rumsey's Steam Boiler-Feed Pumps.

We are daily in receipt of letters making inquiries concerning the capacity of Boiler-Feed Pumps, and in nearly all cases giving very unsatisfactory data (or none at all) from which to judge of the size of the pump to select or recommend. We accordingly would suggest that customers writing to us for Boiler-Feed Pumps should state as nearly as may be the correct replies to the following questions, and we will then be in position to advise intelligently in regard to the matter:

1. Style and number of boilers and rated horse-power.
2. Size of boiler.
3. Steam pressure carried.
4. Size and speed of engine.
5. Style or make of engines.
6. Are boilers used for other purposes, and, if so, what?
7. Temperature of feed water.
8. Length of suction pipe.
9. Style of heater used.
10. Is steam used continuously or intermittently?
11. Give rough diagram showing general arrangement.

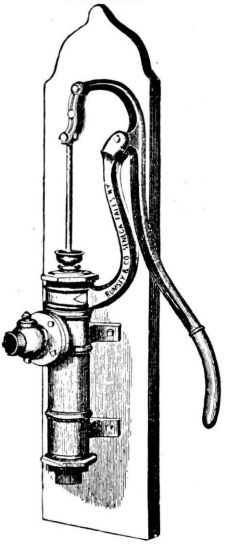
In the following pages our estimate of water required per minute to feed boiler is based upon the accepted standard of 30 pounds per indicated horse-power per hour, and the rating of our pumps at the given speed will allow a liberal margin. The speed of pumps may be increased and correspondingly the capacity.

SPECIAL NOTICE.

The Boiler Pumps above mentioned we offer to the trade as the most improved and desirable feed pumps of the kind made in this country. They are very compact and strong, and all like parts are interchangeable. The holes are drilled to perfect templets. The bearings are babbitted. The piston is cast-brass. The valves are bronze. The globes have large water passages. The connecting tubes and pulleys vary according to size of pump. The pulleys are *turned*. The base is broad and the column substantial. They are set up and run with ease, being built on the proper principle, and of thorough finish in every respect.

New Hand Boiler-Feed Pump, on Plank.

FIG. 161.



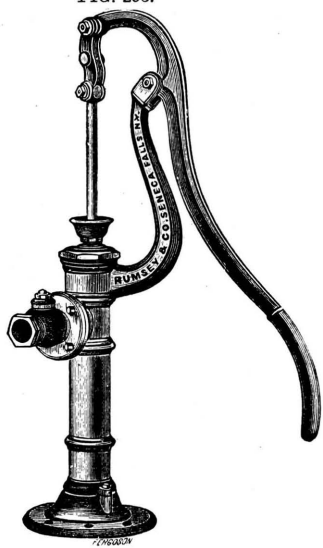
The above figure shows a very serviceable pump for feeding small boilers by hand-power, and well adapted for use in mint distilleries, cheese factories, etc. It is also of ample capacity for feeding larger boilers when used for heating buildings by steam, especially if a steam trap is employed for saving the condensed steam and returning it to the boiler. It is constructed on true scientific principles, with economy of cost, and is fitted with metallic valves for pumping hot as well as cold water. The rod and plunger are of brass. We make this pump either with brackets for bolting to plank or partition, or on base for fastening to the platform of well or reservoir. See next page.

FIG. 161—Sizes and Prices.

No.	Size Pipe. Inches.	Diam. Cylinder. Inches.	Stroke. Inches.	Capacity per Rev. Gallons.	IRON.		BRASS CYLINDER.	
					Cipher.	Price.	Cipher.	Price.
0	1	2	5	1-13	Canary	$12.00	Campaign	$18.00
00	1¼	2½	5	1-8	Camera	14.00	Candidate	22.00

New Hand Boiler-Feed Pump, on Base.

FIG. 295.



The cut shows our Hand Boiler-Feed Pump, on base, adapted to the same purposes as Fig. 161 on preceding page, which see for additional description. This pump has revolving fulcrum for either right or left-handed working. A brass globe check-valve in the eduction outlet prevents the return flow of water into the pump. It is very serviceable for filling still boilers or those under a moderate pressure of steam. Being fitted with metallic valves throughout it pumps hot as well as cold water. In pumping hot water, the pump should be placed as near the water as possible, otherwise the steam is apt to rise and destroy the vacuum.

FIG. 295—Sizes and Prices.

No.	Size Pipe. Inches.	Diam. Cylinder. Inches.	Stroke. Inches.	Capacity per Rev. Gallons.	IRON.		BRASS CYLINDER.	
					Cipher.	Price.	Cipher.	Price.
0	1	2	5	1–13	Candied	$12.00	Candor	$18.00
00	1¼	2½	5	1–8	Candle	14.00	Canine	22.00

Steam Boiler-Feed Pump.

For Power, with Air-Chamber.

FIG. 162.

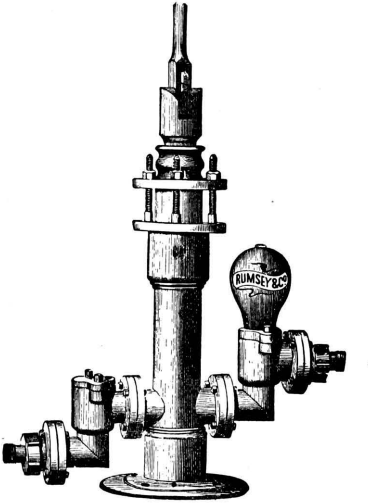


Fig. 162 accurately represents our "Champion" power boiler-feeding pump, having an air chamber on the discharge valve. This pump is the strongest and best article of the kind made. The valves and seats are of bronze, and held in place by an ingenious device of our own invention, by means of which they can be removed for renewal or repair at a trifling cost, and without the aid of a skilled mechanic. Every part is simple, durable, and fitted to exact gauges, so that in case of need, duplicates can be had which are *sure to fit*. All sizes are made with brass plungers, and brass nuts on studs of stuffing-gland. We furnish all appliances for attaching power, such as counter-shafts, hangers, post-boxes, pulleys or gears, crank plate, wrist pin and "stub ends," at a small advance on cost of material and labor.

FIG. 162—Sizes and Prices.

No.	Size Pipe. Inches.	Diam. Plunger. Inches.	Stroke. Inches.	Capacity per Rev. Gallons.	Revolutions per Minute.	Horse-power Boiler.	Cipher.	Price.
1	1	1½	12	1-11	40	40	Canister	$35.00
2	1	2	12	1-7	40	60	Cannibal	40.00
3	1¼	2½	12	1-4	40	100	Cannon	50.00
4	1½	3	12	1-3	40	150	Canoe	60.00

See page 113.

Steam Boiler-Feed Pump.

For Power.

FIG. 163.

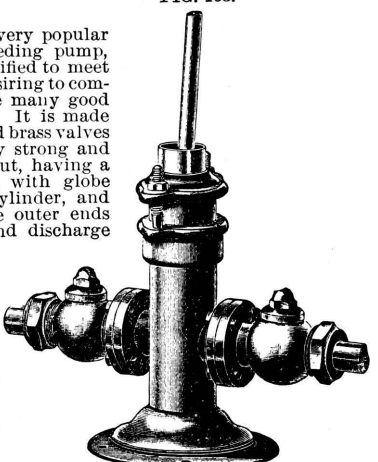


Fig. 163 represents a very popular and excellent boiler-feeding pump, being really Fig. 162 modified to meet the wants of engineers desiring to combine cheapness with the many good qualities of that pump. It is made with cast brass piston and brass valves and caps, and is a very strong and durable pump throughout, having a broad, substantial base, with globe valves bolted to the cylinder, and union couplings on the outer ends for attaching suction and discharge pipes, and with brass nuts on stuffing-gland, studs, etc.

The 4-inch and 5-inch pumps of Fig. 163 are extensively sold to paper mills, distilleries, tanneries, starch factories, etc., for pumping *thick material*, and give great satisfaction for their rare usefulness. For this purpose we attach our "angle valves" instead of the globe valves—the former having no receptacles where such materials can settle and harden, while being of so large a capacity that a high rate of speed is unnecessary.

All sizes of Fig. 163 are made with cast brass plungers.

FIG. 163—Sizes and Prices.

No.	Size Pipe. Inches.	Diam. Plunger. Inches.	Stroke. Inches.	Capacity per Rev. Gallons.	Revolutions per Minute.	Horse-power. Boiler.	Cipher.	Price.
1	¾	1¼	6	1-32	40	15	Canopy	$10.00
2	1	1½	6	1-23	40	20	Cantata	15.00
3	1	2	6	1-13	40	35	Canter	22.00
4	1¼	2½	6	1-8	40	50	Canvas	30.00
5	1½	3	6	9-50	40	75	Canting	40.00
6	2	4	10	1-2	20	100	Canto	60.00
7	2½	5	10	6-7	20	160	Caper	90.00

Steam Boiler-Feeding Pump.

With Column and Single Pulley. For Hand or Power.

FIG. 164.

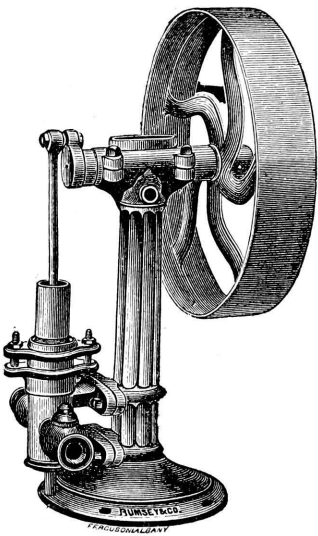


Fig. 164 delineates our Boiler-Feed Pump simliar in construction to Fig. 163, mounted on a strong iron column with a very broad and substantial base and extra long bearing, in which the crank shaft revolves. It is intended to be used as a hand pump for filling the boiler before steam is up, but has a pulley of 18 inches diameter and three inches face, on which a belt can be used when the machinery is in motion. This pump is so constructed that water of high temperature can be pumped without injury to any of its parts, and will force into the boiler against any pressure.

The suction and discharge valves are bolted to the cylinder, and can be changed from one side to the other, or replaced by new ones when needed, without the necessity of replacing all the working parts of the pump in order to get a new valve, as frequently occurs with pumps of other makers. The cut does not convey a fully adequate idea of the size of the column or pump used for the 6-inch stroke, as they are more than double the weight of those of 3-inch stroke. When so ordered we furnish with these pumps an outside bearing for shaft.

FIG. 164—Sizes and Prices.

No.	Size Pipe. Inches.	Diameter Plunger Inches.	Stroke. Inches.	Capacity per Rev. Gallons.	Rev. per Minute. Gallons.	Horse-power. Boiler.	Cipher.	Price.
1	1	2	3	1-26	50	10	Capitol	$30.00
2	1¼	2½	3	1-16	50	18	Capon	38.00
3	1¼	3	3	1-10	45	25	Caprice	48.00
4	1	2	6	1-13	40	20	Capsicum	60 00
5	1¼	2½	6	1-8	40	36	Capstan	70.00
6	1½	3	6	1-5	40	50	Capsule	80.00

All sizes have cast brass plungers. See page 113.

Steam Boiler-Feeding Pump.

On Column, with Tight and Loose Pulleys. For Hand or Power.

FIG. 165.

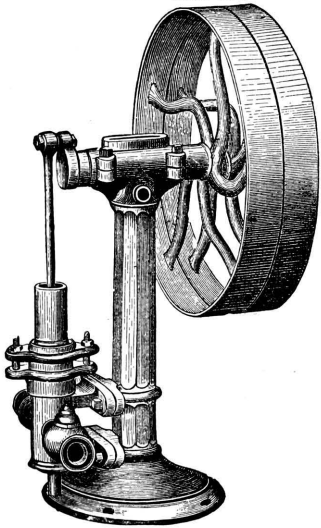


Fig. 165 represents the same pump and column described under Fig. 164, with the additions of a loose pulley and outside bearing (not shown in cut), the last feature effectually preventing the column and pump from being drawn out of line by the belt. These pumps do not involve the necessity of a counter-shaft or other intermediate appliances for conducting the power to operate them, but can be placed in any convenient position (in line with the main shaft), or connected with the crank shaft of the engine direct. The pulleys on the pumps of 3-inch stroke are 18 inches diameter and 3-inches face, while the pulleys on the pumps of 6-inch stroke are 22 inches diameter and 4 inches face. Both pulleys are provided with set screws for fastening them to the crank shaft when needed. We can safely say that these pumps in their entire construction and offices are unequaled by any others made, and have in no case failed to give *perfect satisfaction.*

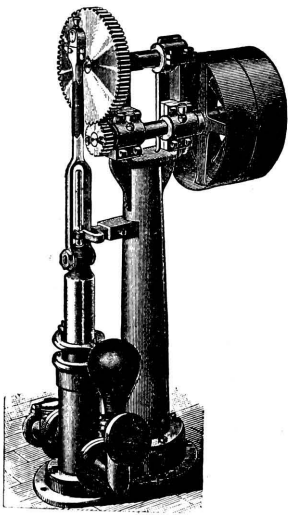
All sizes and kinds of our Boiler-Feeding Pumps are provided with a cock at bottom of the cylinder, for drawing out the water when not in operation, to prevent freezing.

FIG. 165—Sizes and Prices.

No.	Size Pipe. Inches.	Diameter Plunger. Inches.	Stroke. Inches.	Capacity per Rev. Gallons.	Rev. per Minute. Gallons.	Horse-power. Boilers.	Cipher.	Price.
1	1	2	3	1–26	50	16	Captious	$34.00
2	1¼	2½	3	1–16	50	18	Captive	40.00
3	1¼	3	3	1–10	45	25	Capuchin	50.00
4	1	2	6	1–43	40	20	Caracole	65.00
5	1¼	2½	6	1–8	40	36	Carat	75.00
6	1½	3	6	1–5	40	50	Caravan	85.00

Rumsey's Column-Geared Boiler-Feed Pump.

FIG. 400.



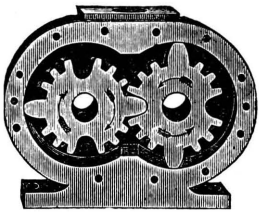
This pump is so well shown in cut as to need scarcely any description. The pump itself is similar to Fig. 162. Valves and valve-seats of bronze, brass plunger and brass nuts on studs of stuffing-glands. The gears are machine cut and the pinion is of bronze. Both shafts run in anti-friction metal boxes. Ratio of gears, 4 to 1. Tight and loose pulleys. All complete ready to fasten to floor and connect to piping. This pump runs lightly and noiselessly, and is adapted to feeding boilers, returning water of condensation from coils, radiators, etc.

FIG. 400—Sizes and Prices.

No.	Size Pipe. Inches.	Diameter Plunger. Inches.	Stroke. Inches.	Capacity per Rev. Gallons.	Rev. per Minute. Gallons.	Horse-power. Boilers.	Cipher.	Price.
1	1	2	6	1–13	40	26	Caravel	$ 75.00
2	1¼	2¾	6	1–6	40	49	Carbine	80.00
3	1½	3½	6	1–4	40	80	Carbon	90.00
4	2	4¼	6	3–8	40	120	Carcass	100.00

Rotary Force Pumps.

Sectional View of Interior.



The above engraving shows the internal arrangement of all sizes of our rotary pumps, from the smallest to the largest. This form of revolving cams or pistons has been demonstrated after many years of experiment and successful practice by the most prominent mechanics and manufacturers to be the best in use, and of the proper shape to insure the very minimum of friction and wear.

The arrows shown in the cut indicate the direction in which the cams should be run; *i. e.*, inwardly, or toward each other at the top or discharging orifice.

The fluid enters at the bottom through the suction, the stream dividing and filling the chambers made by the long teeth, passing around the cams, and discharging from the top through the outlet. In larger sizes the ends of the long teeth are packed by blocks of metal inserted into grooves and pressed out by springs, thus insuring a perfect vacuum and the taking up of any slight wear there may be after years of pumping. The cams are constructed to operate with a minimum of friction and wear, which implies great durability and saving of power. The stream is perfectly continuous, which gives a perfectly uniform strain on all parts of the pump and the driving power, giving a smooth and easy operation, with an almost total absence of noise, jar, and friction.

The vacuum made by this pump is perfect, insuring the immediate "picking up" of the water. There are no "dead points"

to it, and the instant the pump is started the air commences to exhaust in the suction pipe, and does not cease until the whole is exhausted and the water rises.

There being in this pump a total absence of such working parts as valves and other adjuncts which, in other pumps, add to the power required to run, and cause stoppages and liability to derangement, makes this the best pump for use for fire purposes and other work where the greatest reliability is required. Sticks, sawdust, leaves, etc., cannot clog it, and anything liable to enter the suction can pass through the pump without interruption.

These pumps will lift water from 25 to 28 feet perpendicularly, and will force it to any height.

Besides doing the work that any other pump can do, they are able, owing to their construction, to do work that it is impossible for any other pump to accomplish.

We would particularly call attention to the fact that our pumps are made with extra long bearings, which insures long life and greater ease of working.

Hand Rotary Force Pumps.

These pumps are designed for hand-power only. They will lift water as far as any piston pump, and work against pressures of 50 to 60 pounds, discharging a constant stream of the fluid at the point required. By attaching a hose and discharge nozzle they will throw a stream from 50 to 100 feet, when operated by one man.

Their compactness, durability, and the small amount of labor necessary to work them, render these pumps eminently fitted for use in hotels, manufactories, railway stations, oil refineries, creameries, testing pipe and hose, gas companies, etc. We fit them for pumping hot or cold water, oil, spirits, etc. From the nature of the service, breweries, distilleries, malt-houses, etc., should always use bronze pumps.

A thread is cut on the spout for attaching hose.

Hand Rotary Force Pump.

With Balance-Wheel.

FIG. 196.

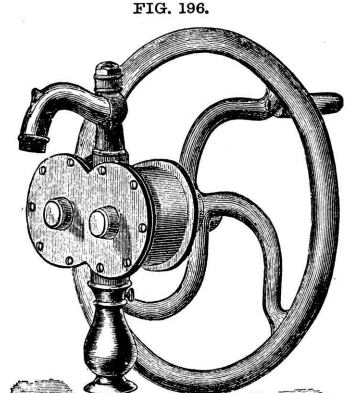


Fig. 196 represents all our medium sizes of Rotary Cistern Pumps. They throw a large and constant stream with an easy and almost noiseless operation, and without the aid of an air-chamber. They are made anti-freezing, being furnished with brass plugs for drawing off the water when not in use during cold weather. With only average care given them they are more durable than the ordinary force pump. Used extensively in cisterns and wells, pumping hot or cold liquids, filling boilers, as tank pumps for supplying tenders for threshing machine, in pumping wines, liquors, and chemicals, testing pipes and hose, as a garden engine and for fire protection, for use in breweries, distilleries, and oil refineries — in fact, they can be applied successfully to any and all uses for which a first-class force pump is adaptable. The cams are of the most approved pattern, and fitted and ground accurately together.

FIG. 196 — Sizes and Prices.

No.	Fitted for Pipe. Inches.	Capacity per Revolution. Gallons.	IRON.		BRASS. *	
			Cipher.	Price.	Cipher.	Price.
1	1¼	1–6	Dainty	$19.00	Damask	$40.00
2	1½	1–5	Dairy	21.00	Damper	45.00
4	2	1–3	Daisy	35.00	Damsel	64.00

* Bronze Pumps are all bronze except fly-wheel and base.
Hose and pipe suitable for Nos. 1 and 2, extra, $3.00.
Hose and pipe suitable for No. 4, extra, $5.00.
The spouts of all sizes of Fig. 196 are screwed for attaching hose.
Hose and play pipes furnished when ordered.

Rotary Tripod Pump.

FIG 396.

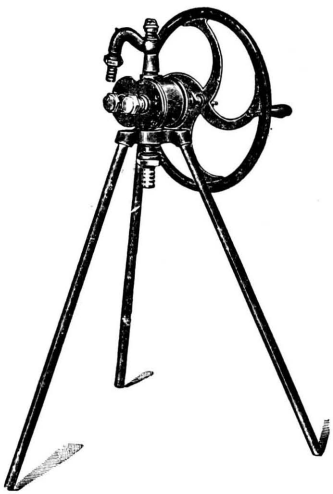


Fig. 396 is our Rotary Tripod Pump. The tripod is of gas pipe with a wide spread at the floor, thus combining lightness and rigidity on uneven surfaces. The pump is made in two sizes, as given below, and is used largely in connection with oil wagons, breweries, etc., and wherever a good portable pump of large capacity is desired.

FIG. 396—Sizes and Prices.

No.	Size of Pipes. Inches.	Capacity per Rev. Gallon.	IRON.		BRASS.	
			Cipher.	Price.	Cipher.	Price.
1	1¼	1-6	Dabbler	$21.00	Dagger	$42.00
2	1½	1-5	Dactyl	23.00	Dagon	47.00

Large Hand Rotary Pump.

For Mines, Steamboats, Breweries, Etc.

FIG. 320.

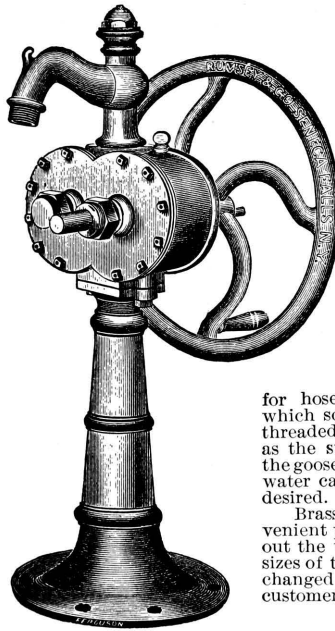


Fig. 320 represents our Hand Rotary Pump of large capacity and power, and particularly adapted for use where large quantities of water or other liquids are to be raised or ejected in a short time. The comparitively great amount of work it will perform in a given time renders it extremely useful in places where machine power is neither convenient nor available. The body of the pump is mounted on a high and strong iron column, with a broad base, arranged for firmly bolting to floor or platform. The outer end of the goose-neck is threaded for hose couplings, while the end which screws into the pump case is threaded for gas pipe of the same size as the suction, so that by removing the goose-neck and attaching gas pipe, water can be elevated to any height desired.

Brass plugs are placed at convenient points in the case for letting out the water in cold weather. The sizes of the pipes given below can be changed to suit the requirements of customers, if desired.

FIG. 320—Sizes and Prices.

No.	Fitted for Pipe. Inches.	Size Hose. Inches.	Capacity per Rev. Gallons.	IRON.		BRONZE. *	
				Cipher.	Price.	Cipher.	Price.
1	1¼	1	1–6	Dancer	$20.00	Daring	$42.00
2	1½	1	1–5	Dandy	23.00	Darken	47.00
4	2	1½	1–3	Danger	35.00	Darning	65.00
5	2	2	1–2	Dapper	40.00	Dashing	75.00

* The Bronze Pumps are all bronze except base and fly-wheel.

Hand Rotary Pump.

With Side Suction for Hose.

FIG. 549.

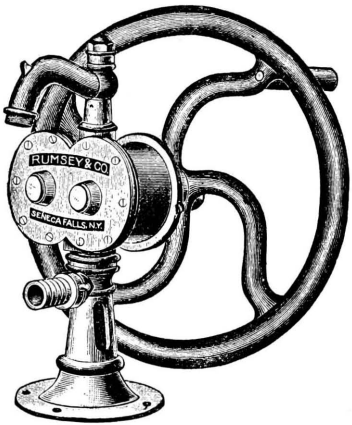


Fig. 549 is adapted for pumping all kinds of liquids, but is especially intended for the use of wine and cider producers.

The side suction is a very convenient arrangement, as the hose may be readily removed from one position to another.

The bronze pumps are best suited for pumping wine, cider, and other liquids which would corrode iron.

FIG. 549—Sizes and Prices.

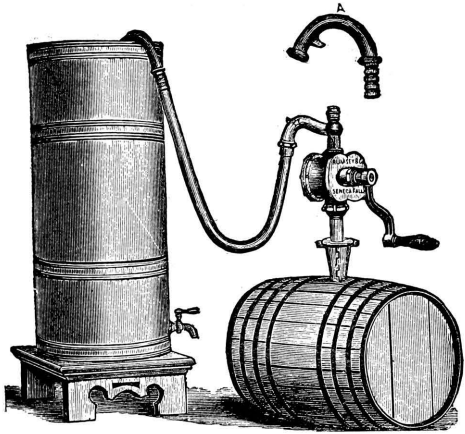
No.	Fitted for Pipe. Inches.	Size Hose. Inches.	Capacity per Rev. Gallons.	IRON.		BRONZE. *	
				Cipher.	Price.	Cipher.	Price.
1	1¼	1	1-6	Daughter	$19.00	Deacon	$40.00
2	1½	1	1-5	Dauntless	21.00	Deadly	45.00
4	2	1¼	1-3	Dauphin	35.00	Dealing	64.00

* The Bronze Pumps are all bronze except base and fly-wheel.

Hand Rotary Pump.

With Improved Barrel Attachment, or Holder.

FIG. 196½.



This cut indicates in a clear manner one of the uses of our celebrated Hand Rotary Force Pumps. It is shown arranged with our improvement for holding the suction pipe of the pump rigid in the bung of a barrel, and also exhibits the pieces which accompany each pump. The holder is a conical sleeve made in halves, designed to clasp the pipe firmly in any sized bung from 1⅛ to 4 inches in diameter, and without injuring the shape of the bung in the least degree. The discharge pipe is so formed that it retains its hold on the tank without other fastening. A suction pipe three feet in length goes with each pump, and is notched at the bottom so that the entire contents of the barrel can be discharged. With this complete and perfect apparatus liquids of any consistency can be pumped from barrels and other casks to any desired distance or height. It is a most useful appendage to all oil stores and refineries, drug houses, paint manufactories, etc.

FIG. 196½—Sizes and Prices.

No.	Suction and Discharge. Inches.	Size Hose. Inches.	Capacity at 100 Revolutions per Minute. Gallons.	IRON.		BRONZE.	
				Cipher.	Price.	Cipher.	Price.
1	1	¾	13	Dearth	$17.00	Debate	$39.00
2	1	1	20	Debar	20.00	Debris	44.00

Above prices include suction pipe, hose coupling, hook and holder, discharge spout, and bung attachment. Brass or copper suction pipes furnished at the extra cost of metal only.

Rumsey's Rotary Oil Service Pump.

FIG. 392.

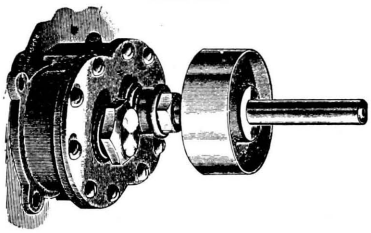


Fig. 392, illustrated above, is our smallest rotary pump. It was designed for pumping lubricants, for cutting tools on monitor lathes, pipe-threading machines, bolt-cutters, etc., also to return oil to the reservoirs from the drip pan under the machines. With the exception of the pulley, the pump is entirely of bronze.

We furnish the pump as shown, or with a bracket for bolting to the machine, as desired.

The pump occupies a space of 5 x 4¼ x 6½ inches.

FIG. 392—Size and Price.

Number.	Capacity at per Minute. Gallons.	Diameter of Pipes. Inches.	Size of Pulleys. Inches.	Cipher.	Price.
1	1 to 4	½	3 x 1⅜	Dubious	$25.00

Power Rotary Force Pumps.

The cuts on the following pages show the compact and substantial form of construction of our Power Rotary Force Pumps. We have built and placed them for a long period of years, and they have given uniform and unequaled satisfaction in all their situations and uses.

The larger sizes, Figs. 198 and 199, have heavy cast-steel mandrels, with two pairs of heavy gears to relieve the cams, running in Babbitt-metal boxes; the whole mounted on a heavy and rigid base with suitable lugs for fastening to foundation or floor.

They discharge a large and constant stream without the aid of an air-chamber, can be run at a very high speed without injury, and will operate for months at a time without cessation, having no packing or valves to become obstructed or worn out. There is nothing about these pumps but metal.

Their qualities adapt them for all establishments where an extra quantity of water is required, for manufacturing, fire protection, water works, supplying sprinkler systems in mills, distilleries, and breweries, for pumping hot liquors; in sugar and oil refineries, pipe lines, paper mills and starch factories, in slate, stone, and marble mills, where they serve the double purpose of supply and freeing the quarries of muddy and gritty water; at railway stations, mines, salt wells; also as wrecking pumps, as they will not become clogged with wet grain, etc.

In our bronze pumps the case, sides, cams, and stuffing-boxes, are all made of the best bronze, leaving nothing exposed to the action of any chemicals.

Rotary Fire Pumps.

In the wide range of pumps designed for fire protection the Rotary Pump stands pre-eminent for power, capacity and small cost of maintenance. Their use largely reduces insurance risks and premiums.

The adaptation of our Power Rotary Pumps to fire service includes the best metals, the best mechanical skill and care in their construction, and nothing omitted which adds to their reliability.

They are arranged so that one, two, or three lines of hose can be attached at the same time, or all the stories of a building can be instantly flooded by means of a pipe from the pump and "cut-offs" for hose on each floor, or the pump can be connected directly with an automatic sprinkler system, or the water may be led through underground pipes to hydrants located outside the building.

We should be pleased to send full particulars for the best mode of fire protection for any city, village, mill, etc.

These pumps may be operated by belting or gearing. A pump purchased *exclusively* for fire service should be connected by means of gearing as less liable to accident in case of fire.

While all sizes of our Fire Pumps are in extensive use, our Nos. 4 and 5, Fig. 199, have met with great favor, and we herewith append directions for their proper management.

Fig. 199, No. 4. Under all circumstances we recommend the provision of twenty horse-power to throw a single stream, and forty horse-power to run the pump to its full capacity. The rate of speed should be, for one 1-inch stream 100 feet high, 160 revolutions per minute; for two 1-inch streams 100 feet high, 325 revolutions per minute.

Fig. 199, No. 5, requires thirty horse-power to throw one 1-inch stream 100 feet high, run at the rate of 100 revolutions per minute; and forty horse-power to throw two 1-inch streams 100 feet high, with a speed of 200 revolutions per minute. To work the pump to its full capacity, viz.: three 1-inch streams thrown to 100 feet high, run at the rate of 300 revolutions per minute, will require eighty horse-power.

Power Rotary Force Pump.

FIG. 550.

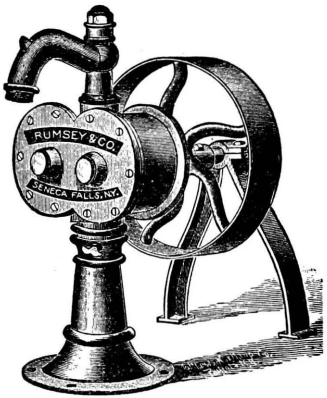


Fig. 550 represents our Rotary Pump on standard, with outside bearing and pulley for power.

It is admirably adapted for high-speed gas or kerosene engines and electric motors. The height of bearings admits the use of a relatively large pulley to compensate for the high speed of the motor.

This pump is always fitted for wrought-iron pipe.

Drip cocks are supplied to prevent freezing.

FIG. 550—Sizes and Prices.

No.	Size Pipe. Inches.	Capacity per Rev. Gallons.	IRON.		BRONZE.	
			Cipher.	Price.	Cipher.	Price.
1	1¼	1-6	Decide	$25.00	Decoy	$47.00
2	1½	1-5	Decimal	28.00	Deface	52.00
4	2	1-3	Declaim	45.00	Defend	75.00

Power Rotary Force Pump.

Mounted on Iron Frame.

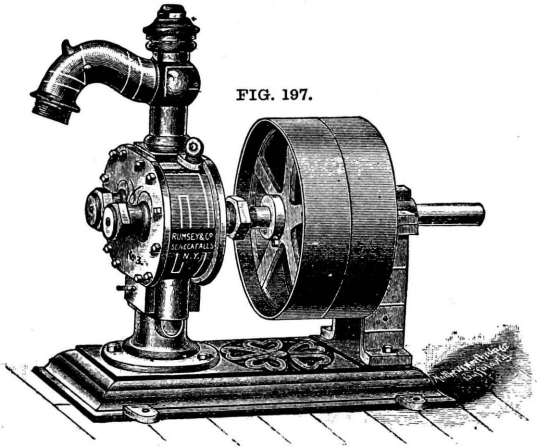


FIG. 197.

The above cut shows one of our celebrated Rotary Power Pumps, without outside gearing, arranged with tight and loose pulleys, outside Babbitt bearing, etc. This is a cheap and very useful pump, well adapted to establishments requiring but a small stream pumped and want it rapid and constant. It is very compact and durable, and in contrast to its size and price will be found to possess a large capacity and ability to perform a great deal of hard work. It is well adapted for a small fire pump, and will throw water from 125 to 150 feet horizontally. For oil refineries, breweries, distilleries, etc., it is admirably suited for various purposes, and also in extensive use in cotton and woolen factories for pumping drinking water into upper rooms. These pumps are constructed in the same perfect manner as those of a larger class, the only difference being the absence of the outside gearing. The driving shaft is made of ample length to permit a balance wheel with handle to be placed on outside of the bearing, readily enabling it to be worked by hand in an emergency. The spout is screwed for hose on the outer end, and for wrought-iron pipe where it connects to the pump. The spout can be removed and connection made with iron pipe wherever it is necessary to force the water upward to any height above the pump.

These pumps can be run up to 200 revolutions per minute without injury, although we recommend a lower rate of speed.

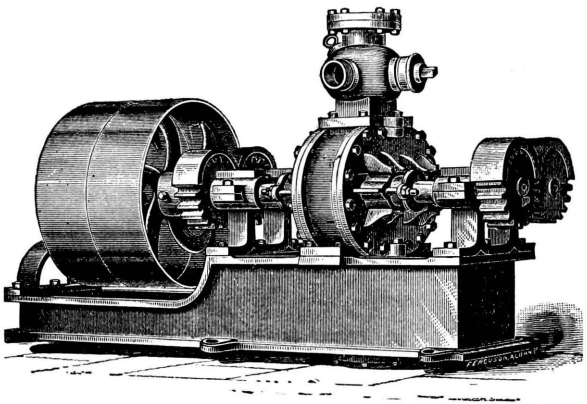
FIG. 197—Sizes and Prices.

No.	Fitted for Pipe. Inches.	Capacity per Rev. Gallons.	Size Pulleys. Inches.	IRON.		BRONZE.	
				Cipher.	Price.	Cipher.	Price.
1	1¼	1–6	8 x 2½	Dial	$26.00	Diet	$45.00
2	1½	1–5	8 x 2½	Diaper	31.00	Digest	55.00
4	2	1–3	12 x 3¼	Dicer	48.00	Digger	75.00
5	2½	1–2	15 x 3¼	Dicky	54.00	Dilemma	90.00

Balance wheels for above pumps $1.00, $2.00, and $3.00, according to size.

Power Rotary Force Pump.

FIG. 198.



The cut shows Fig. 198 complete in all sizes. Furnished with either tight and loose pulley or gears for driving, as most convenient to the purchaser.

A capacious vacuum chamber, into which the suction pipe screws, is also cast in the frame.

See page 129 for further description.

FIG. 198—Sizes and Prices.

No.	Capacity per Rev. Gallons.	Diam. Suc. and Dis. Inches.	Revolutions per Minute.	Size of Pulleys.	IRON.		BRONZE.	
					Cipher.	Price.	Cipher.	Price.
1	1-3	2	200	14 x 4½	Diploma	$100.00	Dogma	$160.00
2	6-7	2½	175	16 x 5½	Divan	115.00	Dolphin	180.00
3	1 1-4	3	150	18 x 6½	Diver	160.00	Domino	260.00
4	1 3-4	4	125	20 x 8½	Divine	240.00	.....	.....
5	2 1-6	5	100	Geared	Doctor	300.00	.....	.....
6	4	8	100	Geared	Doric	450.00	.....	.....

These pumps can be run at a much higher speed, if necessary. After using, turn the cams *backward* two or three times to empty the pump of water and prevent freezing; then pour in some good oil and turn the cams *forward* two or three times. Any of our Power Rotary Pumps can be used for fire service.

Power Rotary Fire Pump.

With Air-Chamber and Safety-Valve.

FIG. 199.

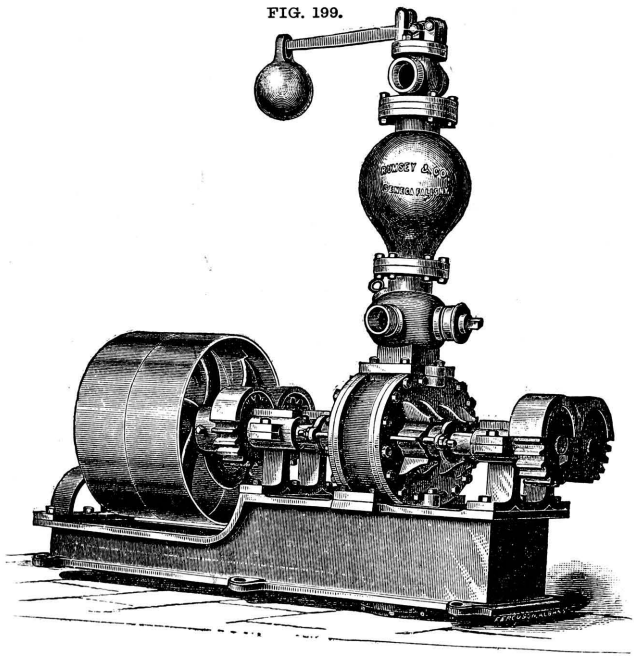


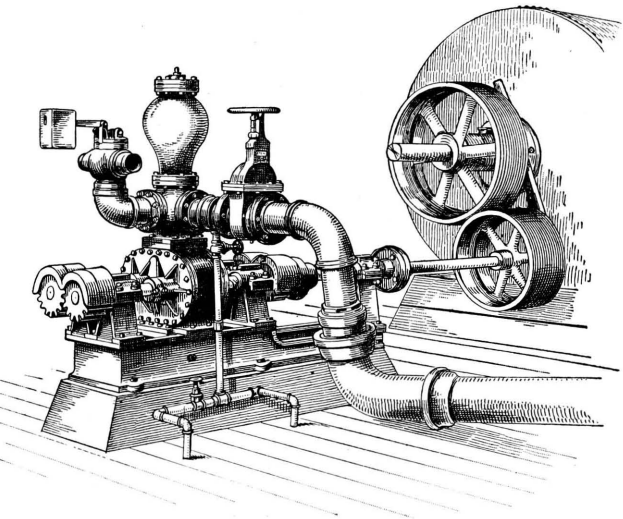
Fig. 199 correctly represents one of our Rotary Fire Force Pumps. For description see page 129.

FIG. 199—Sizes and Prices.

No.	Size Suction Pipe. Inches.	Size Dis. Hose. Inches.	Number of Streams.	Capacity per Rev. Gallons.	Revolutions per Minute.	Cipher.	Price.
1	2	1½	1	1-3	350	Drench	$110.00
2	2½	1½ or 2	1	6-7	325	Drink	125.00
3	3	2	2	1 1-4	300	Drizzle	175.00
4	4	2 or 2½	2	1 3-4	280	Dropsy	255.00
5	5	2½	3	2 1-6	250	Drubbing	315.00
6	8	2½	4	4	250	Dream	475.00

Prices include safety-valves and outside shaft.
Size of pulleys same as for corresponding size, Fig. 198.

Rumsey's Underwriters' Rotary Fire Pump with Frictional Gearing.



We illustrate our new Underwriters' Fire Pump above. It is of approved pattern and designed for extra heavy service. Case and cams are of phosphor bronze. Gears, shafts, and bearings are extra heavy. Bearings lined with best Babbit metal, scraped to a fit. The water ways are ample and will not clog. Gears are protected with heavy covers. The pump may be run at 300 revolutions per minute. At 225 revolutions it has 1000 gallons capacity, which will supply four 1⅛ inch streams. To furnish four streams about 90 horse-power should be provided. The pump shown in cut is driven by grooved friction drums, directly connected to a turbine, the suction being taken from the tail race.

We will be pleased to quote on pumps complete with any type of gearing specified, also on the necessary supplies for fire protection in mills and factories.

Horizontal Centrifugal Pump.

For Paper Mills, Sugar Houses, Tanneries, Breweries, Irrigation, Contractors' Uses, for Drilling Sewers, Sugar and Rice Plantations, Wheel and Lock Pits, Excavations, Etc.

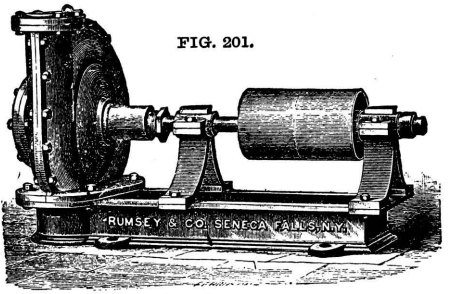


FIG. 201.

Figs. 201 and 202 represent our Centrifugal Pumps, the best pumps of the class in the market. They may be most effectively used for low or moderately high lifts, and, under such conditions, they are as efficient as any pump that can be made. For low lifts they are more efficient than other pumps. At the same time, the larger the pump the higher the lift it may work against successfully.

These pumps are easily set up and not likely to get out of order. In running them be sure that the disc revolves in the direction indicated by the arrow on the casing. A foot valve, Fig. 126, should always be attached to the suction pipe of Fig. 201, and before this pump is first started, the priming plug in the upper part of the casing should be removed, the pump filled with water, and the plug returned to its place. Or, if the pump is supplied with our suction primer, open the pet-cock on top of the shell and continue working plunger of primer until water flows out of the pet-cock; close it and the pump is ready for action. Be sure that all the joints in the suction pipe are air tight; a leak in this pipe will prevent the perfect working of the pump. Do not loosen the collar on the end of the shaft of Fig. 201, or move it, except to take up wear, and then always move it toward the bearing, not away from it. If this collar gets hot, oil it.

Vertical Centrifugal Pump.

FIG. 202.

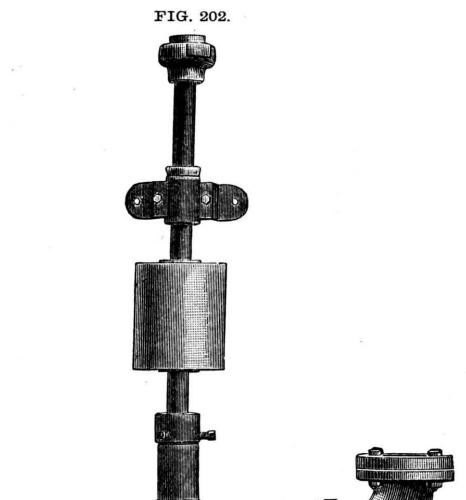


Fig. 202 represents our Vertical Centrifugal Pump, which is intended to be submerged in the liquid to be raised; it is consequently primed and ready to start at all times.

In placing pump see that the shaft is maintained in a VERTICAL position, that legs rest on an even foundation, and shaft turns free and easy. Support shafting above pump couplings by collars resting on shaft bearings.

In ordering Fig. 201 or 202 state whether pump is to be Right or Left Handed.

The shaft we furnish extends about three feet above the pump, and its weight, and that of the disc, is supported by a bronze step below the pump, which may be adjusted when worn by means of a screw.

We furnish extra shafting for Fig. 202 at lowest market rates.

Table Giving Sizes of Pulleys and Discharge Pipes.

Also Capacity and Revolutions per Minute Necessary to Raise Water to Different Heights with Our Centrifugal Pumps.

NOTICE—The revolutions per minute given below are the proper and necessary speed to run these pumps, when running at *full capacity*, to raise water to stated height. Increasing the speed, the pump will discharge *more* water to the *same level*, or raise the *same amount of water to a higher level*. The converse of this is also true.

FIG. 201, 202—Sizes, Etc.

No.	Capacity per Minute. Gallons.	Suc. Inches.	Dis. Inches.	PULLEY.		REVOLUTIONS PER MINUTE PUMP SHOULD RUN TO RAISE WATER TO HEIGHT GIVEN.									
				Diam. Inches.	Face. Inches.	5 feet.	10 feet.	15 feet.	20 feet.	25 feet.	30 feet.	35 feet.	40 feet.	50 feet.	60 feet.
2	150	2	1½	6	6	426	603	740	850	955	1046	1130	1210	1350	1480
3	300	2½	2	7	8	323	460	564	650	727	796	885	920	1020	1100
4	450	3	2½	7	8	314	446	545	630	700	770	835	890	995	1090
5	650	4	3	7	8	300	425	520	600	660	735	795	850	950	1045
6	1250	5	4	10	10	283	395	480	555	620	690	750	805	895	995
6½	1850	6	5	10	10	250	355	435	505	565	620	690	715	800	875
7	2600	7	6	12	12	215	300	370	425	485	520	560	605	675	745
8	4750	10	8	18	12	180	225	300	360	390	425	450	475	500	550

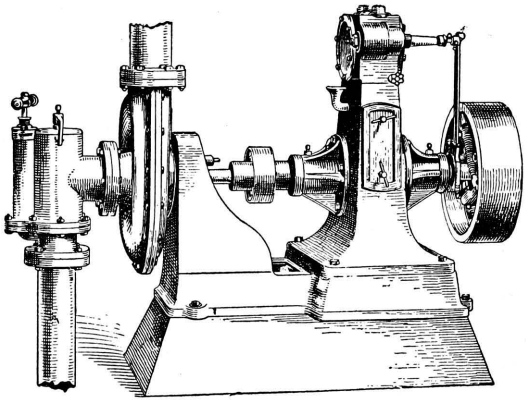
FIG. 201—Prices.

No.	IRON.		IRON WITH SUCTION PRIMER.		BRASS.	
	Cipher.	Price.	Cipher.	Price.	Cipher.	Price.
2	Druggist	$ 30.00	Duenna	$ 45.00	Dumpling	$ 60.00
3	Druid	65.00	Duet	80.00	Dumpy	120.00
4	Drummer	75.00	Duke	90.00	Dunce	145.00
5	Drunken	90.00	Dulcet	105.00	Dungeon	160.00
6	Ducal	120.00	Dullness	145.00	Duped	250.00
6½	Duchy	140.00	Duly	180.00	Durance	325.00
7	Duck	180.00	Dumb	220.00	Dusky	400.00
8	Ductile	310.00	Dumbly	375.00	Dust	.....

FIG. 202—Prices.

No.	IRON.		BRASS.	
	Cipher.	Price.	Cipher.	Price.
2	Duster	$ 24.00	Dustman	$ 48.00
3	Dutch	55.00	Dutchman	100.00
4	Dwarf	65.00	Dwarfish	130.00
5	Dwelling	70.00	Dweller	160.00
6	Dwindle	105.00	Dwindling	200.00
6½	Dyke	130.00	Dynamic	305.00
7	Dynasty	150.00	Dynamo	350.00
8	Dysnomy	265.00	Dysticus	.....

Rumsey's Horizontal Centrifugal Pump Directly Connected to Steam Engine.



The cut above shows an efficient combination for pumping large quantities of water, either clear or full of foreign matter, against moderate heads.

It consists of a Rumsey Horizontal Centrifugal Pump directly connected with an automatic cut-off, high speed, steam engine. Both pump and engine are bolted to a bed-plate, making the whole self-contained and portable.

We make this arrangement for our pumps, sizes 4 to 7 inclusive.

It is plain that electric motor, rotary engine or water wheel may be used instead of the engine shown.

Let us know what is desired and working conditions; we are always pleased to send quotations on any arrangement.

The Paper Maker's Pump — Fan Pump.

Specially Adapted for Raising and Forcing Pulp in Paper Mills; also Fluids of all Kinds.

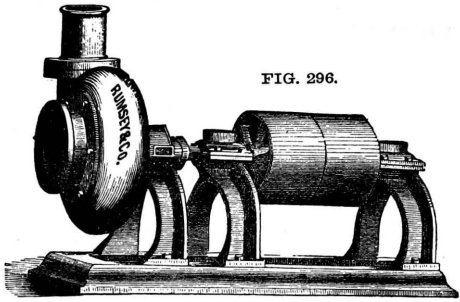


FIG. 296.

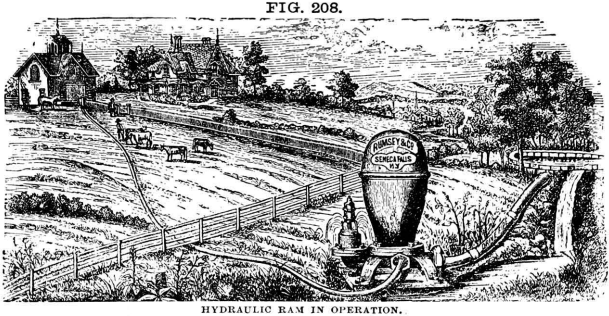
We have recently made this pump more particularly to meet the wants of those in the paper-manufacturing business who desire a good and efficient pump for forcing pulp. We have, within the past few years, furnished large numbers of them to paper mills all over the United States, and we can assert that all inform us who bought them that they are the best article of the kind they have ever used. We claim much for them on account of a new arrangement. The discharge pipe is so constructed *as to revolve; thus it can be placed in any position at right angles with the frame upon which it rests and revolves.* They are built with large capacity, of best materials, and are mounted on heavy iron frame, with tight and loose pulleys. We furnish them with tight and loose pulleys, either 9 inches in diameter 6-inch face, or 12 inches in diameter 5-inch face. These pumps are simple, durable, and will not clog, and perform to perfection all work for which they are designed.

FIG. 296—Sizes and Prices.

No.	Diameter Suction. Inches.	Diameter Discharge. Inches.	IRON.		BRASS.	
			Cipher.	Price.	Cipher.	Price.
3	6	4	Dynamite	$ 78.00	Dynamical	$180.00
4	8	6	Dynamometer	125.00	Dyspeptic	235.00

Improved Hydraulic Rams.

FIG. 208.



HYDRAULIC RAM IN OPERATION.

The Hydraulic Ram and Its Principles.

The cut represents one of our Improved Hydraulic Rams, put up and in operation, furnishing water for house, cattle, etc. The fountain is shown at the right. From thence the water is taken through the drive pipe to the ram, located in any convenient position not less than twenty-five to fifty feet from the fountain. This is necessary, as about this length of pipe is required to secure the velocity of water requisite to work the ram properly. In cases where it is not practicable, the pipe may be bent in a coil five or six feet in diameter. From the ram the water is forced upwards through the discharge pipe as shown, to the point of discharge. The ram and pipe should be carefully secured against the effects of the frost.

The simple and effective operation of this machine, and its great durability withal, render it the most useful and valuable apparatus yet developed in the department of hydraulics for elevating water, and conveying it to almost any desired distance, depending, however, on the amount of fall at disposal.

It is practicable where the spring or brook is only eighteen inches higher than the ram; yet as the height increases, the more powerfully the ram operates, and its ability to force water to a greater elevation and distance is correspondingly strengthened. The relative height of the spring or source of supply above the ram, and the elevation to which it is required to raise, determine the relative proportion between the water raised and wasted—the quantity raised varying according to the height it is conveyed with a given fall; also, the distance the water has to be conducted, and consequent length of pipes, have some influence on the quantity delivered at the point of discharge; as the more extended the pipes through which the water has to be forced by the ram, the more friction there is to be overcome by additional efforts on the part of the machine; notwithstanding, rams are frequently and successfully employed for driving water a distance of 100 to 200 rods, to an altitude of 100 to 200 feet above the ram, and severer trials than even these testify to the indispensability of this almost automatic device.

Improved Hydraulic Rams.

A fall of ten feet from the brook or spring to the ram is abundantly sufficient to raise water to any point less than 150 feet above the location of the machine; while the same amount of fall will also raise water to a point considerably higher, though the supply of water will be proportionately diminished as the height and distance increases. When the requisite quantity of water is forthcoming from the ram, operating under a certain fall, it is not judicious to give it more fall, for by so doing the strain on the machine is measurably augmented, those parts doing the labor are overtaxed and the durability of the apparatus impaired and lessened.

For ordinary purposes it is sufficient to say, that in conveying water say fifty or sixty rods, it may be safely calculated that from one-tenth to one-fourteenth of the water can be raised and discharged at an elevation ten times as high as the fall, or one-seventh part of the water can be raised and discharged say five times as high as the fall applied, and so in like proportion as the fall or height is varied.

Thus, with a fall of five feet, of every seven gallons drawn from the fountain one may be raised twenty-five feet, or half a gallon fifty feet. Or with ten feet fall, one gallon of every fourteen may be raised to the height of one hundred feet, and so in like proportion as the fall or height is varied.

Turns in either drive or discharge pipe should be avoided if possible. When it is impossible to set the ram without having elbows in the pipes, make the elbows as large as may be, so as to place as little obstruction to the free and easy flow of the water as is practicable. These machines are made of iron and brass. The valve and the valve stem are made of bronze, which has more durable and lasting qualities than any other composition.

Where water is to be forced to any very great distance (say more than seventy-five rods) it is preferable to use a discharge pipe of larger caliber than named in the table on next page. With a given supply of water under a great fall, the ram is not required to be of as large size as for the same quantity of water under a less fall. That is, our No. 4 ram would be of sufficient capacity for taking water from a spring or brook, furnishing seven gallons per minute, where the fall was eight or ten feet; when if there was not over three or four feet fall to the same spring or brook, then a No. 5 ram would be better adapted to the place. The ram can be placed in a pit, and the pipes should be under ground for protection against frost or other injury.

The size of the pipes should vary in proportion to the distance the water is to be conveyed, as the greater the distance the larger the pipe in proportion to the size of the machine. This, however, applies to the discharge pipe alone.

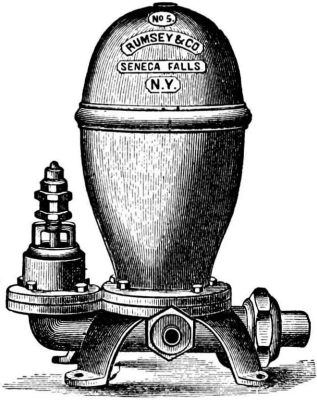
By means of an adjuster applied to each of our rams the quantity of water drawn from the fountain may be varied at pleasure, thus readily adapting the machine to a *variable supply*.

The efficiency of the Hydraulic Ram as a pumping engine varies from forty to eighty per cent. of the total power of the water discharging through drive pipe. We have found that the following rule will give a good average of quantity of water raised in a given time.

GENERAL RULE.—Multiply the quantity supplied by the spring (in gallons per minute) by sixty-five. Multiply this product by the "Head," or number of feet in fall; then divide by 100 times the height to which the water is to be elevated. The result will give the quantity of water raised per minute.

Our rams are fitted for either wrought-iron pipe or lead pipe.

FIG. 208.



N. B.—The *length* of the Drive or Supply Pipe should not be less than three quarters of the height to which the water is to be raised, or five times the height of supply; it may, however, be longer.

FIG. 208—Sizes and Prices.

No.	Minimum Quantity of Water Required to Operate Ram. Gallons per Minute.	Length of Drive Pipe. Feet.	CALIBER OF PIPES.		Cipher.	Price.
			Drive. Inches.	Discharge. Inches.		
2	2	Five to six times the height of the supply.	¾	⅜	Edict	$ 9.00
3	4		1	⅜	Editor	11.00
4	8		1½	½	Egotist	14.00
5	14		2	1	Elbow	22.00
6	25		2½	1¼	Embargo	40.00
7	60		4	2	Emblem	75.00
8	120		6	2½	Embryo	125.00

We solicit correspondence with parties desiring to use Hydraulic Rams. We are always ready to advise customers as to the best sizes for their own cases, and to give them the benefit of our large experience in these matters.

Hydraulic Pressure Pump.

For Testing Steam Boilers, Pipes, Etc.

FIG. 166.

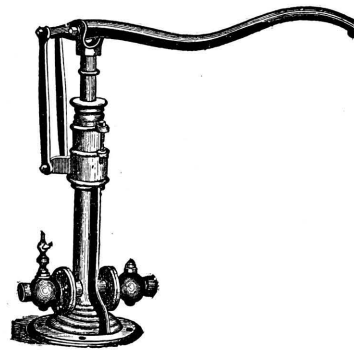


Fig. 166 represents our Hydraulic Pressure Testing Pump. It is made exceedingly strong and compact, and designed especially for testing, boilers, pipes, casks, etc. The piston being small, it is not calculated for a lift pump, but within its proper sphere no better pump is made, as a pressure of 1000 pounds to the square inch can be generated with it by the power of one man. It should be placed very near the water. A little suction, however, will not detract from its efficiency; on the contrary, we advise the use of one or two feet of suction pipe.

FIG. 166—Sizes and Prices.

No.	Diameter Suction. Inches.	Diameter Discharge. Inches.	Diameter Plunger. Inches.	Stroke. Inches.	IRON.		BRASS.	
					Cipher.	Price.	Cipher.	Price.
1	1	⅜	1¼	4	Facile	$25.00	Factor	$45.00

Plumbers' Hydraulic Pressure Pumps.

FIG. 193.

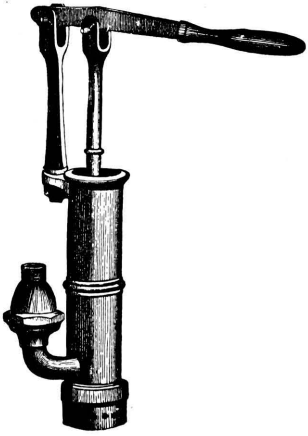
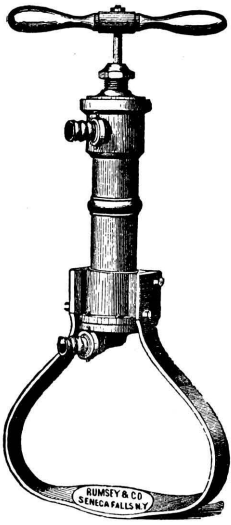


FIG. 194.



The cuts show two styles of our brass pressure pumps for plumbers' use, designed for clearing pipes of obstructions, testing water and gas pipes, etc.

Accompanying each of these pumps is a tube of conical form, with a screw cut the whole length, fitted for attachments to pipes of any material or size up to 1¼-inch internal diameter. The lever, fulcrum, and rod of Fig. 193 are made of malleable iron, and very strong and durable.

Fig. 194 is designed for the same uses as above, with additional advantages, as obstructed pipes can be cleared or cleansed with this pump either by suction or force, as the case may require. Pipes can also be tested by means of exhaustion, instead of filling—often a disideratum of importance. The rod is of *solid brass;* the stirrup of the best forged wrought iron. All the other parts are brass. It is constructed in a skillful and workmanlike manner, and made perfect in all its workings, after the best scientific principles.

FIGS. 193, 194—Sizes and Prices.

Fig.	Fitted for	Diameter Cylinder. Inches.	Stroke. Inches	Capacity per Stroke. Gallons.	Cipher.	Price.
193	Hose	2	4	1–14	Fairy	$14.00
194	Hose	2	5	1–12	Fakir	20.00

Gas Companies' and Plumbers' Brass Drip Pumps.

FIG. 195.

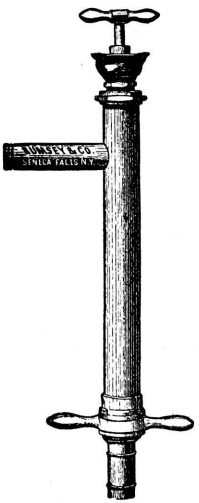


FIG. 330.

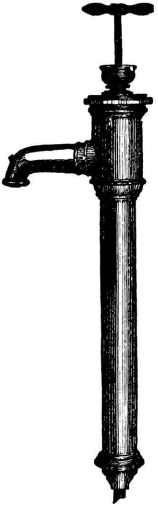


Fig. 195 shows our new Gas Drip Pump, admirably designed and constructed for all its purposes. The cylinder is 20-inch stroke, and made of brass, with cap and stuffing-box of same metal, and a solid brass rod. The spout passage, being nearly as large as the cylinder, insures a free delivery of the drip. It works perfectly, excelling other drip pumps in several features, and needs only to be seen to secure a ready approval.

Fig. 330 shows a Brass Cylinder Suction Pump, also used for extracting the water from gas drips. It is substantially built, and gas companies, plumbers, and others, will find it excellently adapted for their uses. We make it with 20-inch stroke.

FIGS. 195, 330—Sizes and Prices.

Fig.	Fitted for Pipe. Inches.	Diameter Cylinder. Inches.	Stroke. Inches.	Capacity per Stroke. Gallons.	Cipher.	Price.
195	¾ or 1	2	20	¼	Famous	$15.00
330	¾ or 1	2	20	¼	Fanatic	12.00

Fig. 195 is all brass.
Fig. 330 has brass cylinder.

Brass Air Pump — Mounted on Plank.

FIG. 167.

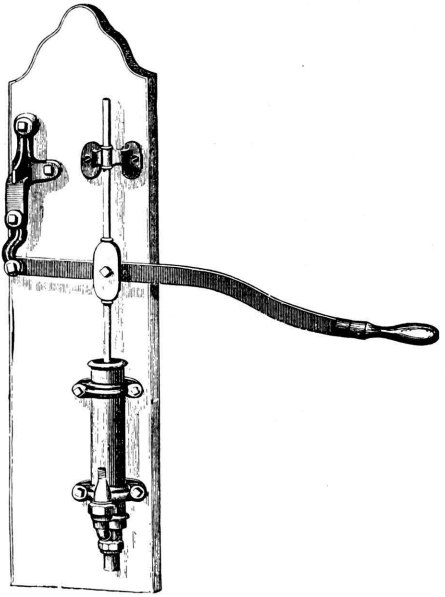


Fig. 167 shows our Brass Air Pump, constructed for forcing air or any gas into barrels, casks, or other receivers of small holding capacity of any nature. It is handsome, convenient, and perfectly made, being entirely of brass, except the lever and fulcrum. Many of its numerous uses can be greatly augmented by placing two pumps upon the same plank and lengthening the lever, thereby enabling two men to work it.

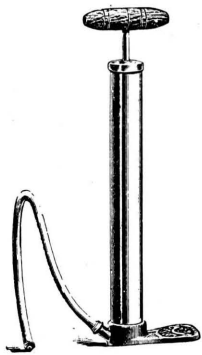
FIG. 167—Sizes and Prices.

No. 1, 2-inch cylinders, 18 cubic inches per stroke, (Fanfaron), ... $15.00
No. 2, two 2-inch cylinders, 36 cubic inches per stroke, (Fandango), ... 35.00

Rumsey's Bicycle Pumps.

Low Price; Proper Construction; Durable.

FIG. 450.



Our Fig. 450 "Best Yet" Bike Pump is specially made for inflating pneumatic tires. It is equipped with suitable hose, and our Improved Universal Swivel Coupling, with which a connection may be made in one-half the usual time.

Price Complete, with Hose and Coupling, ... $2.00

FIG. 398.

Our "Easy" Air Pump is the handiest yet for repair shops, laboratories, etc. The cylinder is 3 inches diameter, 3½ inches stroke, made of brass. The pump will readily yield a pressure of 70 pounds.

Price, ... $10.00

Rumsey's Superior Double-Acting Spray Pump.

FIG. 391.

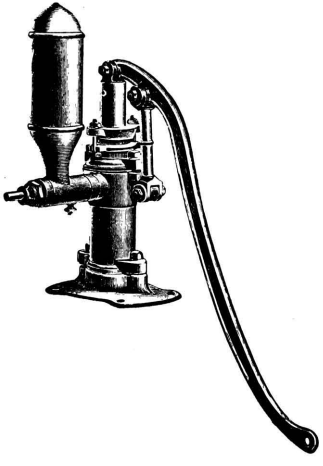


Fig. 391 represents our new Double-Acting Force Pump, which is superior to any thing heretofore offered for spraying trees or plants with poisonous mixtures. Being double acting, it throws a continuous stream which, with our "Lilly" nozzle can be diffused over a wide area.

This pump is fitted for hose or iron pipe as ordered. Made in one size only.

FIG. 391—Size and Price.

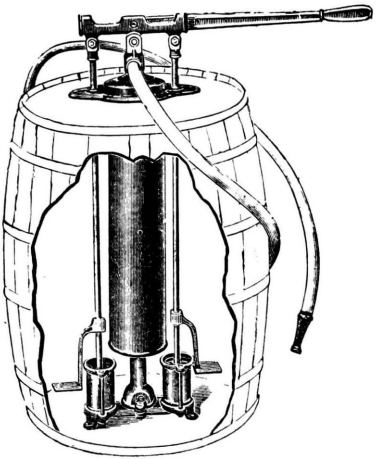
Diam. of Outer Cylinder. Inches.	Diam. of Defferential Plunger. Inches.	Stroke. Inches.	Suction Pipe. Inches.	Hose Discharge. Inches.	Pipe Discharge. Inches.	Price.
2½	1¾	3	1	½	¾	$9.50

For brass-lined cylinder, add $2.00 to list. With lower valve of metal, $1.00 net extra.

Fittings and hose furnished at lowest market rates.

Rumsey's Double-Cylinder Spray Pump.

FIG. 393.



This new pump which we offer to the trade for the season of 1897 is the result of many years of careful study, and combines all the necessary features to make a simple, practical and perfect spray pump. All the working parts are of brass, the valves are metal and can not get out of order or be injured in any way by the liquid used. The air-chamber is made of galvanized iron and has larger capacity than that on any other spray pump made; it will hold sufficient compressed air to keep the spray going from six to ten minutes after the pump is stopped. The agitators are placed so that they keep the liquid thoroughly stirred, and without requiring any extra work to do it. Plungers can be easily removed and packed by a farmer without the necessity of employing a skilled mechanic, or of taking the pump to a shop where special tools are required. In every respect it is the most desirable spray pump ever offered to the trade, and is sold under a full guarantee that it will in all cases work as represented.

FIG. 393—Size and Price.

With three feet of hose and spraying nozzle, . . . $15.00

The Florida Spraying Pump.

FIG. 43.

This cut represents our new and improved force pump, the best and cheapest pump of the class ever put on the market. It has a greater capacity than many more expensive pumps; it will throw a continuous and powerful stream to a height of forty feet or more, and when used with hose, and our "Lilly" Nozzle, it will diffuse a poisonous solution over a wide area, and destroy insects, bugs, or worms, which attack plants and trees. It is the best spraying pump ever offered to the trade, and as such it will become invaluable to the farmer, orchardist, and horticulturist.

FIG. 43—Size and Price.

With three feet of hose, spraying nozzle, and sufficient 1¼-inch gas pipe to reach the bottom of an ordinary barrel, ... $12.00

Barrel not included in price.

Rumsey's "Watch" Spraying Pump.

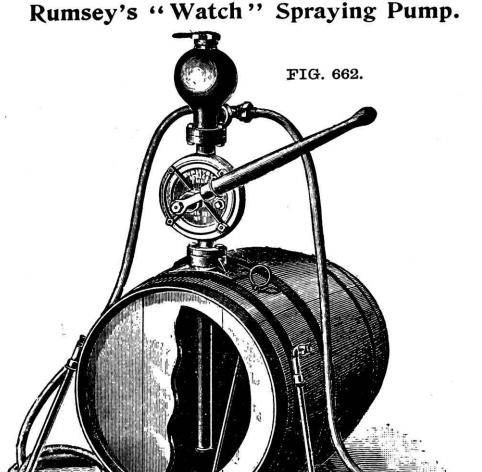


FIG. 662.

Fig. 662 represents our new "Watch" Spray Pump, especially recommended for its easy action and powerful spraying work. It is supplied with a large air-chamber, and the working parts of the pump are made entirely of brass. The lever can be placed at any angle desired or required for convenient working.

FIG. 662—Sizes and Prices.

No. 1 Pump, only,	$10.00
No. 2 Pump, only,	13.00
No. 3 Pump, only,	14.00
No. A-1, with three feet of ¾-in. iron suction pipe, with brass strainer, and one length of ½-in. discharge hose five feet long, and "Lilly" nozzle,	14.00
No. A-2, with three feet of 1-in. iron suction pipe, with brass strainer, and one length of ½-in. discharge hose five feet long, and "Lilly" nozzle,	16.50
No. A-3, with three feet of 1¼-in. iron suction pipe, with brass strainer, and one length of ½-in. discharge hose five feet long, and "Lilly" nozzle,	18.00
No. B-1, with three feet of ¾-in. iron suction pipe, with brass strainer, two leads of ½-in. discharge hose, each five feet long, with "Lilly" nozzles and Agitator,	17.00
No. B-2, with three feet 1-in. iron suction pipe, with brass strainer, two leads of ½-in. discharge hose, each five feet long, with "Lilly" nozzles and Agitator,	19.00
No. B-3, with three feet 1¼-in. iron suction pipe, with brass strainer, two leads of ½-in. discharge hose, each five feet long, with "Lilly" nozzles and Agitator,	21.00

Longer lengths of discharge hose can be furnished when ordered at extra price.
Barrel not included in price.

Rumsey & Co.'s Syringes and Fire Extinguishers.

FIG. 268.

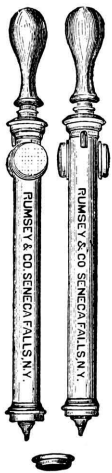


FIG. 269.

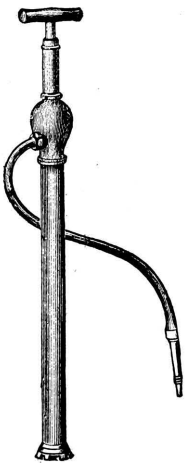
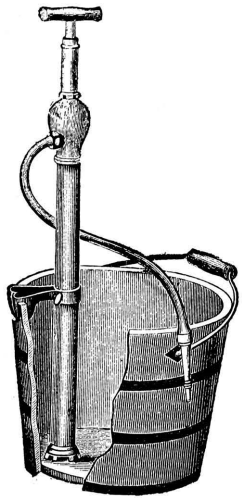


FIG. 270.



The above cuts represent our well-known Syringes and Fire Extinguishers, valuable for watering lawns, gardens and greenhouses, or washing windows, etc. They are conveniently adapted for sprinkling liquid solutions of any kind on trees and plants to destroy insects, etc., or will throw a strong jet of water and subdue a fire in a chimney or on a roof, where no other protection is available. They are made of brass, are handsome, durable, and do not rust. Price of Fig. 269 includes three feet discharge hose, with brass discharge pipe and rose sprinkler.

Brass Syringes.

FIG. 268—Sizes and Prices.

No. 1, 12-inch barrel (Farce), ... $5.00
No. 2, 16-inch barrel (Farina), ... 6.00

Fire Extinguishers.

FIG. 269—Sizes and Prices.

No. 1, Medium Size, 20-inch barrel (Farmer), ... $7.00
No. 2, Large Size, 24-inch barrel (Fathom), ... 8.00

Rumsey's Hydropult.

FIG. 663.

Made entirely of brass, with brass ball valves. Can be conveniently transported from place to place, as it is very light, but at the the same time a powerful and most effective force pump.

This is a most convenient pump for use in gardens, conservatories, and other places where it is necessary to spray small shrubs, vines, etc.

FIG. 663—Size and Price.

With 3 feet of ½-inch discharge hose, and "Lilly" nozzle (Favoring), ... $9.00

The Aquaject, or Fire Annihilator.

FIG. 267.

The above cut shows the practical operation of our new and improved Portable Aquaject, the most perfect and effective hand apparatus ever invented for throwing water. All working parts liable to rust or corrosion are made of brass. For washing windows and carriages and showering gardens or conservatories it has no equal. It is adapted for throwing liquid solutions of all kinds to destroy noxious insects and bugs of every nature on plant, vine, or tree, and should be kept in every house, store, and factory in the country for fire protection. In fact, in a diminished degree, it is capable of every use of an ordinary force pump, and far more convenient. It is always ready for use and not liable to get out of order. Will throw water at the rate of 8 to 10 gallons per minute to a height of 50 feet or more.

With each pump is sent suction and discharge hose connected, so that it requires no labor to put in immediate operation. Longer lengths of hose can be furnished if desired.

FIG. 267—Size and Price.

With 3 feet suction and 3 feet discharge hose, brass discharge pipe, and rose sprinkler (Federal), . . $9.00

The Hydronette, or Fire Extinguisher.

FIG. 297.

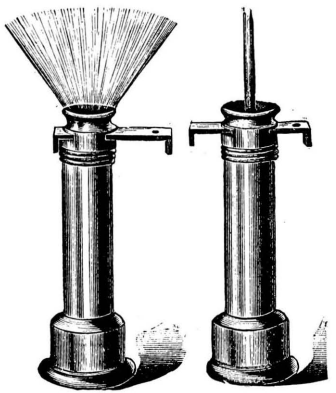
This cut illustrates our "Hydronnette" or Fountain Pump, with some of its different applications to use. It is a new and very efficient combination of a double-acting force pump. This portable pump is made of brass, hansomely finished, with sprinkler and rubber hose attached. It is durable and just as represented, and does not rust or dry up. It recommends itself. It is novel, simple in mechanism, and useful at all seasons of the year, while it is particularly valuable as an always-ready fire extinguisher. It is adapted to a great variety of uses for which an ordinary pump is not available. It will throw a stream of water 50 feet, and is so portable that the person using it can, by carrying a pail of water on his arm, and pointing the nozzle of the pump in any direction, distribute the water as desired. This feature makes the pump especially valuable for gardening purposes, for washing windows, etc., and for the ready application of water in case of fire. The water can thus be used with economy and not wasted, as is too often the case when this pump is not at hand. Of course it will be seen that it can be employed very effectively with mixtures intended for the destruction of insects which inflict so much injury upon fruit trees, cotton plants, potato vines, etc. It has also been used for controlling swarms of bees, when in the air. In fact, every possible applicatian adequate to its power, and where facility of operation is required, can be made of this pump, and its manifold advantages will be apparent to the most casual observer. The pump can be used for clearing obstructed drains, and the advantage of being able to force a continued and rapid stream of water into the drain, or of exerting a very considerable pressure, is quite obvious.

FIG. 297—Size and Price.

No. 2, with 3 feet hose, nozzle and sprinkler complete (Ferret), ... $8.00

Rumsey's "Lilly" Spraying Nozzle.

FIG. 385.



The illustration is of our newly-invented Spraying Nozzle. If used with our Force Spraying Pumps, the tallest fruit trees and smallest vines can be thoroughly sprayed with less loss of material than any other in use, because it can be changed instantly from the coarsest to the finest mist-like spray.

It can be cleansed without taking apart, and by a single movement the solid stream becomes a fine or coarse spray, as desired.

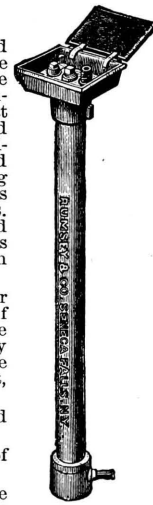
It does not become stopped up or fouled; it does not leak or drizzle. Every drop of the compound is forced to its destination.

We put them on all of our Spraying Pumps without additional cost.

FIG. 385—Price.

Per dozen (Fertile), ... $6.00

FIG. 541.



Eagle Hydrant.

FIG. 540.

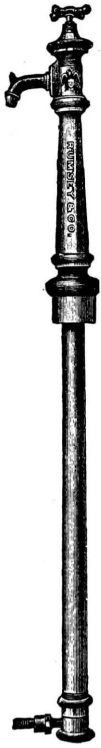


Fig. 540 represents our improved style of hydrants for house use. We believe this to be the best in the market, in all respects. By an ingenious device they are so arranged that closing the valve opens the drip, and *vice versa*, making them strictly anti-freezing. At the bottom a swivel and union coupling (of brass and having ground joints) furnishes a ready means of attaching them to the service-pipes. We always recommend the use of lead pipe to connect them to service-pipes to avoid the danger of breaking when the frost leaves the ground.

Fig. 541 shows very plainly our make of Street Washers. They are of the same construction and have the same style valve as Fig. 540, and they are excellently adapted for use where a hydrant, on account of its height, would be undesirable.

A suitable wrench is furnished with each one.

Always measure from center of inlet-pipe to ground line.

We feel sure that parties who have once tried our hydrant will not use any other.

FIGS. 540, 541—Sizes and Prices.

FIG. 540.			FIG. 541.		
Length to Set in Ground. Inches.	Cipher.	Price. ¾-inch.	Length to Set in Ground. Inches.	Cipher.	Price. ¾-inch.
18	Fibre	$ 9.25	18	Firmly	$ 7.75
24	Fiddler	9.50	24	Fishery	8.00
30	Fife	9.75	30	Fitful	8.25
36	Fighter	10.00	36	Fitness	8.50
42	Figure	10.50	42	Fixtures	9.00
48	Filbert	11.00	48	Flagon	9.50
54	Firefly	11.50	54	Flaky	10.00
60	Firelock	12.00	60	Flame	10.50
72	Firkin	13.00	72	Flash	11.50

For the "Favorite" Hydrants and Street Washers, the cheapest and best in the market, see page 158.

FIG. 547.

The "Favorite" Yard Hydrant and Street Washer.

Fig. 547 partly represents our New Anti-Freezing Yard Hydrant, which we know to be superior to any in the market at the same price, and equal in every particular to any of the higher-priced ones. The valves, screws, and all working parts are of a fine quality of brass, and are made to standard gauges. It is fitted at the bottom with a ground-joint brass union for connecting to the service-pipes. By the adoption of our new device we avoid all obstructions to the water in its outward passage and obviate the sticking of the valve. We use no rubber rings. The packing is the best known and can be replaced with ease. In these particulars we have made improvements that our patrons, the dealer and consumer, will recognize and appreciate. We have spared no expense in bringing this hydrant up to its present high standard of perfection. The set-length is of 1-inch wrought-iron pipe. We avoid the friction of a stuffing-box and the necessity of it by an ingenious arrangement of our own, which is superior in every sense. The anti-freezing drip is positive and automatic in its action. No failure can occur in closing the drip when the water is let on, or in opening when the water is shut off.

FIG. 545.

Fig. 545 represents our Street Box Hydrant. It is made in all essential points like Fig. 547, the only difference being in the head or top. This part is not changed from the standard style of street washer heads. The cover encloses the whole and excludes all dirt. The screws in this and Fig. 547 are of brass and are cut to a fine pitch. The whole can be removed by unloosing two bolts, the nuts of which are fitted to the key. When these are removed the whole internal arrangement can be taken out without digging up the hydrant.

FIGS. 547, 545—Sizes and Prices.

Length to Set in Ground. Inches.	FIG. 547.		FIG. 545.	
	Cipher.	Price. ¾-in.	Cipher.	Price. ¾-in.
18	Flaunt	$4.00	Flock	$3.00
24	Flavor	4.10	Floral	3.10
30	Flaxen	4.20	Flotsam	3.20
36	Fleshy	4.30	Flounder	3.30
42	Flighty	4.40	Flower	3.40
48	Flimsy	4.50	Flowing	3.50
54	Flinch	4.60	Fluent	3.60
60	Flinty	4.70	Fluid	3.70
72	Flirt	5.00	Fluke	4.00

Rumsey's New Adjustable Curb Box.

For Opening or Closing Cock in Service-Pipe.

FIG. 543.

The cut shows our New Adjustable Curb Box for opening or closing cock in service-pipe, as many times as becomes necessary in making repairs or changes in the pipes in buildings or hydrants in yards.

The outside case is made of cast-iron and is 22 inches high, while through this can be moved to any desired length the piece of 1-inch pipe enclosing rod. The lower end of this rod is forked in proper shape to take and turn the lever of service or corporation cock, and the upper end flattened so it can be operated with such wrenches as plumbers use.

To prevent these boxes being tampered with while in use, the top is protected by a neat cap, which can be removed and replaced only by those using.

FIG. 543—Size and Price.

Number.	Length of Pipe. Inches.	Length of Rod. Inches.	Extreme Length. Inches.	Cipher.	Price.
1-inch.	42	43	62	Flutter	$3.00

Wrought-iron Keys, each, 75 cents.

Curb Block.

FIG. 544.

Fig. 544 shows a very neat and serviceable Curb Block to be used in connection with above. The block measures 7 x 7 inches, with opening to receive cap of Curb Box.

FIG. 544—Price.

Each (Focus) . . . . . $ .60

Plumbers' Cast-Iron Square Sinks.

FIG. 342.

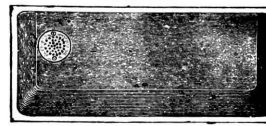
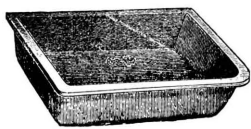


FIG. 342—Sizes and Prices.

Size. Inches.	Depth. Inches.	Cipher.	Price. Painted.	Size. Inches.	Depth. Inches.	Cipher.	Price. Painted.
12 x 18	6	Gadfly	$1.70	18 x 36	6	Gaming	$4.75
12 x 20	6	Gaff	1.85	18 x 42	6	Gammon	6.25
14 x 20	6	Gaily	2.20	20 x 24	6	Gamut	3.25
14 x 22	6	Gainer	2.25	20 x 28	6	Gander	3.50
14 x 24	6	Gaiter	2.30	20 x 30	6	Gang	4.00
15 x 23	6	Galaxy	2.40	20 x 36	6	Garbage	5.25
15 x 25	6	Gallant	2.75	20 x 38	6	Garbled	5.75
15 x 27	6	Gallery	2.90	20 x 40	6	Garden	6.00
16 x 20	6	Gally	2.50	20 x 42	6	Garland	6.50
16 x 24	6	Gallow	2.70	20 x 48	6	Garlick	7.25
16 x 28	6	Gambit	3.20	21 x 32	6	Garment	4.50
16 x 30	6	Gambler	3.50	22 x 42	6	Garnet	6.75
18 x 24	6	Gambol	2.80	24 x 30	6	Garnish	4.75
18 x 30	6	Game	3.75	24 x 48	6	Garrison	8.00
18 x 32	6	Gamester	4.25	.....	...	.....	.....

FIG. 625.



Round Corner Sinks.

FIG. 625—Sizes and Prices.

No.	Size. Inches.	Depth. Inches.	Cipher.	Price. Painted.
1	16 x 24	6	Garter	$2.60
2	18 x 30	6	Gasket	3.75

FIG. 372.

Slop Sinks.

FIG. 372—Sizes and Prices.

No.	Size. Inches.	Depth. Inches.	Cipher.	Price. Painted.
1	16 x 16	10	Gastric	$4.00
2	20 x 14	12	Gaudy	5.00
3	24 x 20	12	Gauze	6.00

FIG. 627.

Hydrant Cess Pools.

FIG. 627—Sizes and Prices.

No.	Size. Inches.	Depth. Inches.	Cipher.	Price. Painted.
1	12 x 12	6	Gavel	$1.80
2	14 x 14	6	Gavelock	2.00
3	16 x 16	6	Gavat	2.50

Sewer Trap.

With Trap and Strainer.

FIG. 375—Size and Price.

No.	Size. In.	Depth. In.	Outlet. In.	Cipher.	Price.
1	16 x 16	8	2	Gaunt	$3.50

Sewer Trap and Slop Sink Combined.

With Trap and Strainer.

FIG. 374—Sizes and Prices.

No.	Size. In.	Depth. In.	Outlet. In.	Cipher.	Price.
1	12 x 12	6	2	Gazelle	$2.25
2	15 x 15	11½	2	Gelatine	3.35
3	18 x 18	12	3	Gelding	4.25
4	20 x 20	12	3	Gamel	5.25

Hydrant Cess Pools.

With Bell Trap.

FIG. 626—Sizes and Prices.

No.	Size. In.	Depth. In.	Outlet. In.	Cipher.	Price.
1	12 x 12	6	4	Genius	$2.25
2	14 x 14	6	4	Gentian	2.65
3	16 x 16	6	4	Gentle	3.25

Cellar Traps.

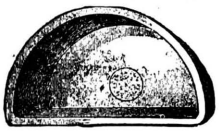
FIG. 628—Sizes and Prices.

No.	Size. In.	Depth. In.	Outlet. In.	Cipher.	Price.
1	9 x 9	2¼	2	Ghastly	$1.25
2	12 x 12	2¼	2	Giant	1.75

Corner Sinks.

FIG. 373—Sizes and Prices.

No.	Sides. In.	Front. In.	Depth. In.	Cipher.	Price.
1	20	28	6	Gifted	$2.50
2	22	31	6½	Giddy	3.15



Half-Circle Sinks.

FIG. 371—Sizes and Prices.

No.	Back. In.	Width. In.	Depth. In.	Cipher.	Price.
1	24	14	6	Gimcrack	$2.50
2	27	14	6	Ginger	3.75

Sink Strainers.

FIG. 630—Sizes and Prices.

Diameter. In.	Cipher.	Price, per Dozen.
4½	Gizzard	$2.00

Adjustable Sink Brackets.

FIG. 629—Sizes and Prices.

Number.	For Sinks.	Cipher.	Price, each.
1	12 to 18 in. wide	Glove	$ .90
2	18 to 24 in. wide	Gnash	1.50

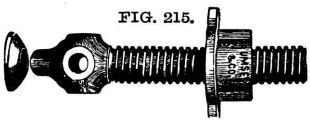
Sink Couplings.

For Lead Pipe (Gnome), per dozen, . . $2.00

Cast-Iron Jack Screws.

With Nut to Let into Wooden Block.

FIG. 215.



This is a very strong, convenient, and useful jack screw, and we recommend it to all parties requiring an economical and effective article for raising buildings, etc.

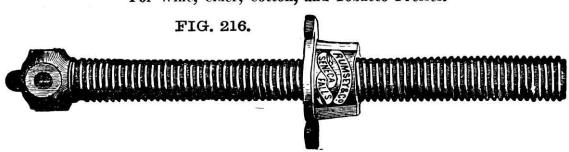
FIG. 215—Sizes and Prices.

3 inches diameter, 22 inches in length (Halcyon), each, ... $6.00
4 inches diameter, 24 inches in length (Handily), each, ... 8.00

Cast-Iron Screws.

For Wine, Cider, Cotton, and Tobacco Presses.

FIG. 216.

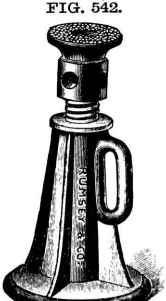


From our own actual experience we can strongly recommend these screws to all parties building and using presses. They cost much less than wrought-iron screws, and are far better for most purposes, as they cannot be bent out of line, and are constructed so that it is almost impossible to break them by any strain or pressure.

FIG. 216—Size and Price.

Diameter of Screw, 4 inches; length, 4 feet (Handmaid), ... $15.00

FIG. 542.



Wrought-Iron Jack Screws.

With Iron Stands. Loose or Swivel Caps.

FIG. 542—Sizes and Prices.

Diameter of Screw. Inches.	Length of Screw. Inches.	Thread Cut Inches.	Will Raise. Inches.	Cipher.	Price.
1½	11	8	6	Hanker	$ 6.00
1¾	12	9	7	Harbor	7.00
2	15½	12	9	Harem	10.00
2½	17½	14	10	Harness	14.00
3	20	16	12	Harvest	16.00

Patent Improved Clay and Sand Augers.

For Boring Wells.

FIG. 228.

FIG. 228—Sizes and Prices.

CLAY AUGERS.				SAND AUGERS.			
Size. Inches.	To Couple to Pipe. Inches.	Cipher.	Price.	Size. Inches.	To Couple to Pipe. Inches.	Cipher.	Price.
2½	1¼	Heap	$ 6.00	2½	1¼	Hector	$ 7.50
3	1¼	Hearing	6.75	3	1¼	Hegira	8.50
4	1¼	Heater	10.50	4	1¼	Helix	13.25
6	1½ or 2	Heaven	25.00	6	1½ or 2	Helmet	30.00

We make also a Sand and Clay Auger Combined, which we list at same size and price as Sand Augers.

Malleable Iron Driving Caps.

FIG. 349.

For receiving blows from wood maul or block, when struck with iron sledge, for driving wells. A new and unequalled pattern.

FIG. 349—Sizes and Prices.

For Tubing. Inches.	Cipher.	Price.
1¼	Helper	$ .75
1½	Hemlock	.90
2	Heretic	1.50
STEEL DRIVING CAP, OR HEAD.		
1¼	Hermit	$3.00
1½	Heron	4.50

Iron Maul, with hardwood face, each, (Hickory), . . $2.50

Cutting Pipe in Driving Lengths and Threading Same, for each cut and thread, ...10

Improved Iron Well Wheel.

FIG. 219.

Fig. 219 represents our Iron Well Wheel, or Pulley, a strong, useful, and convenient device for drawing water from a well, by means of two buckets and a rope or chain running over same, and can also be used to advantage wherever a sheave or pulley is required. It works rapidly and easily, and is very serviceable about stores and warehouses for raising and lowering light weights.

FIG. 219—Size and Price.

10 inches diameter (Highness), per dozen, ... $10.00

Improved Cast-Iron Revolving Clothes Iron.

FIG. 220.

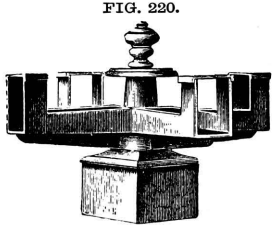


Fig. 220 shows our Improved Revolving Clothes-line Reel, a very convenient, serviceable, and strong article. It is arranged with iron cap to cover post, to which the axle is attached, with nut to hold the revolving iron in place. The post cannot split or rot, and the entire combination is very durable, being far superior to the many cheap substitutes in the market.

FIG. 220—Price.

(Hobble), per dozen, ... $24.00

Brown's Patent Pipe Tongs.

FIG. 230.

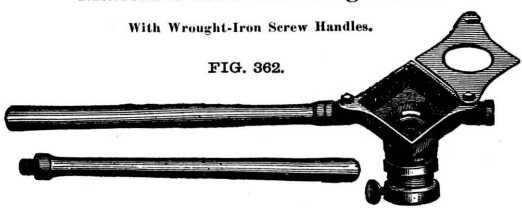
FIG. 230—Sizes and Prices.

No. 1,	takes from	⅛ to 1	inch pipe,	$ 3.00
No. 1½,	"	⅜ to 1	"	3.50
No. 2,	"	½ to 1¼	"	4.00
No. 3,	"	1 to 2	"	5.00
No. 4,	"	1½ to 3	"	10.00

Malleable Iron Screwing Stock.

With Wrought-Iron Screw Handles.

FIG. 362.



Gas-pipe Stock, with one solid die, either ¾, 1, or 1¼ inches, as ordered, each, ... $10.00
Extra Dies, each, ... 3.00
Extra Bushings, each, ...40

Stanwood's Patent Pipe Cutter.

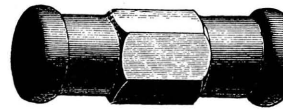
FIG. 361.

FIG. 361—Sizes and Prices.

Number.	Cuts Pipe. Inches.	Price.		Price. Cutter Blocks, with Wheels.	Price. Wheels.
		Case-hardened.	Steel-faced.		
1	⅛ to 1	$1.50	$1.75	$ .35	$ .10
2	1 to 2	2.25	2.50	.50	.15

Rod Couplings.

FIG. 380.



We make them both of brass and malleable iron, as ordered. They are used for connecting lengths of piston-rod together in wells of any depth.

FIG. 380—Sizes and Prices.

Malleable rod coupling, tapped for $\frac{7}{16}$ or $\frac{3}{8}$-inch rod, as shown in cut, ...	$ .25
Malleable rod coupling, with $\frac{7}{16}$-inch stub ends, . .	.40
Rods and couplings, $\frac{1}{2}$ and $\frac{7}{16}$-inch, per foot, . . .	.12½
Rods and couplings, $\frac{5}{8}$-inch, per foot, ...	.16
Brass rod coupling, tapped for $\frac{3}{8}$-inch rod, ...	.25
Brass rod coupling, tapped for $\frac{5}{8}$-inch rod, ...	.45

Liberal discounts made from above lists.

Iron Cock.

FIG. 256.

Fig. 256 represents an Iron Cock with brass plug, of which we make two sizes. These cocks are used on our house and force pumps as shown by cuts.

FIG. 256—Sizes and Prices.

No. 1 Cock, for the smaller sizes of our house and force pumps, with thread cut for 1-inch hose coupling (Hornet), ...	$2.50
No. 2 Cock, made with threads for 1¼-inch hose coupling and designed for larger sized pumps (Hunter), ...	3.00

Plantation and Farm Bells.

With Standard Complete.

FIG. 212.

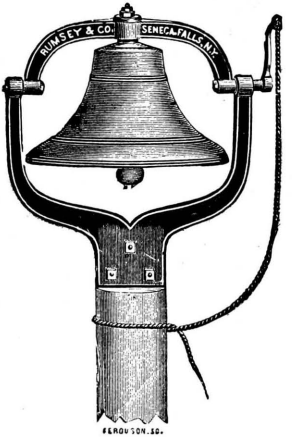


Fig. 212 represents our Steel Amalgam Bell for farm and plantation use. The very low price at which these bells are sold places them within the reach of all.

They are made of a peculiar alloy of steel, known only to ourselves, which gives them a clear and deep tone. Other manufacturers have copied this bell in shape, but they cannot obtain the tone.

FIG. 212—Sizes and Prices.

No.	Diameter. Inches.	Weight. Pounds.	Cipher.	Price.
1–0	13	44	Jacket	$ 4.75
2–0	15	52	Jacobin	6.50
3–0	15½	63	Jade	7.50
4–0	16½	79	Jaguar	9.75
5–0	17	89	Jalap	11.00
6–0	19½	125	Janitor	15.00
7–0	21½	181	Jargon	20.00

Rumsey & Co.'s Large Steel-Amalgam Bells.

With Hangings and Frames Complete.

FIG. 210.

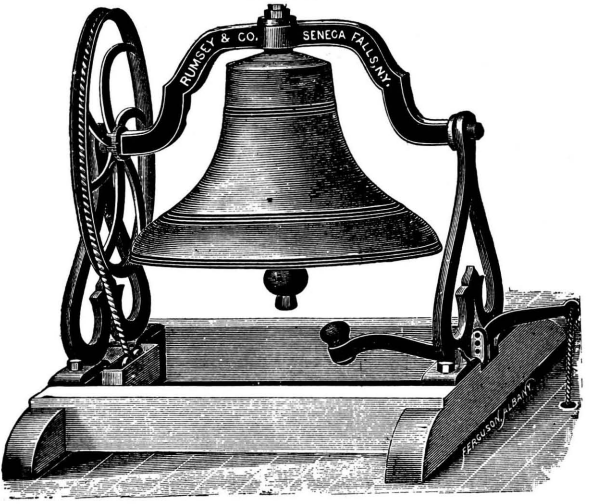


Fig. 210 represents our Steel Amalgam Bells as we mount the larger sizes for churches, factories, seminaries, engine houses, etc. We have sent thousands of these bells to various portions of the United States, Canada, and Europe, as their comparative cheapness enables any church or community to buy them, while their durability, tone, and harmony, always give splendid satisfaction.

We send them all to market richly bronzed. We place tolling attachments on these bells when ordered.

The Steel-Amalgam Bell is not intended to compete with Bell-Metal Bells in tone and volume of sound, but at the same time has a tone peculiarly its own, which always gives satisfaction, and the price is less than one-tenth that of a Bell-Metal bell. Prices include hangings complete.

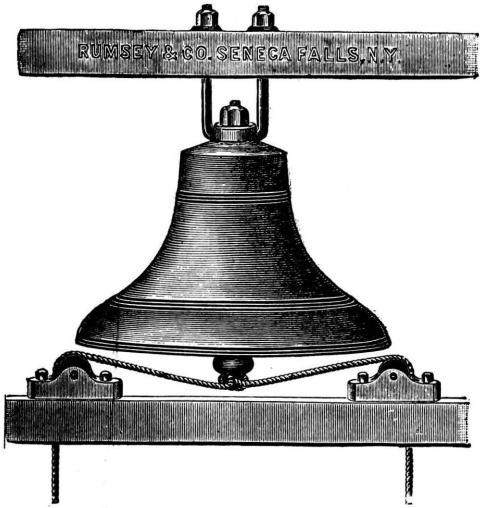
FIG. 210—Sizes and Prices.

No.	Diameter. Inches.	Weight Bell. Pounds.	Weight Bell and Standard. Pounds.	Size Frame. Inches.	Without Tolling Attachment.		With Tolling Attachment.	
					Cipher.	Price.	Cipher.	Price.
6	25	139	230	40 x 40	Jasmine	$25.00	Jelly	$29.00
6½	27	210	340	40 x 40	Jasper	36.00	Jerked	40.00
7	30	260	490	40 x 48	Jaunt	50.00	Jester	56.00
8	34	418	730	48 x 54	Jealous	75.00	Jetsam	81.00

Fire Alarm Bells.

With Striking Apparatus and Two Pulleys.

FIG. 347.



The above cut represents our Fire Alarm Bell in all sizes—25 inches and upwards—bolted to cross beam in belfry or tower, with apparatus ready for use. The entire arrangement is simple, cheap, and strong. The alarm can be struck upon both sides of the bell, instead of on one side, as in other alarms, and with more ease and rapidity. The force of the blow can also be regulated to a nicety, thereby reducing any chance of breakage to the minimum. As will be seen from the cut, there is nothing complicated to create disorder or need repair. The different sizes are fitted with striking apparatus corresponding to the size and weight of the bell. These bells are as well adapted in every respect for fire alarms, and can be heard as far as those made of copper and tin of same size, while quite as durable, and far less in cost. They are made of the same metals as our celebrated church bells—a composition used only by ourselves. All our bells are richly gilded.

FIG. 347—Sizes and Prices.

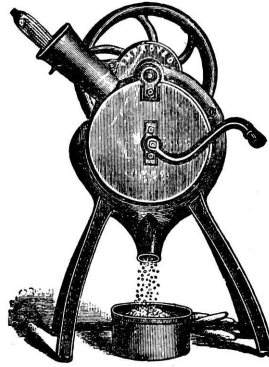
Number.	Diameter of Bell. Inches.	Weight of Bell. Pounds.	Cipher.	Price.
6	25	140	Jetty	$20.00
6½	27	210	Jewel	30.00
7	30	260	Jingle	40.00
8	34	418	Joyful	60.00

The above prices include two pulleys and yoke, as shown in cut.

Improved Burrall's Patent Corn Sheller and Separator.

Right-Handed.

FIG. 520.



We would call your attention to our new pattern right-handed Patent Burrall Corn Sheller, which we are now ready to place on the market. The hopper is on the left side of the machine, as you face the crank, and can therefore be operated by the right and fed by the left hand, so that one man can both work and feed the sheller. The wheels, boxes, etc., are the same as our other sheller, the only difference being in the sides, with which exception the repairs of one will fit the other. It will shell any sized corn by regulating the spring in the hopper.

Care should be taken to get the spring properly in its place in case it should be necessary to take it out. We always, in case of packing, make the cost of package as reasonable as possible. The cuts of the different parts composing a sheller, as shown on the next page, will be found very useful to parties having occasion to order repairs.

FIG. 520—Prices.

(Kernel), ... $8.00

We can pack from six to eight in an ordinary hogshead, or one or two in a case.

Corn Sheller Pieces.

FIG. 353.

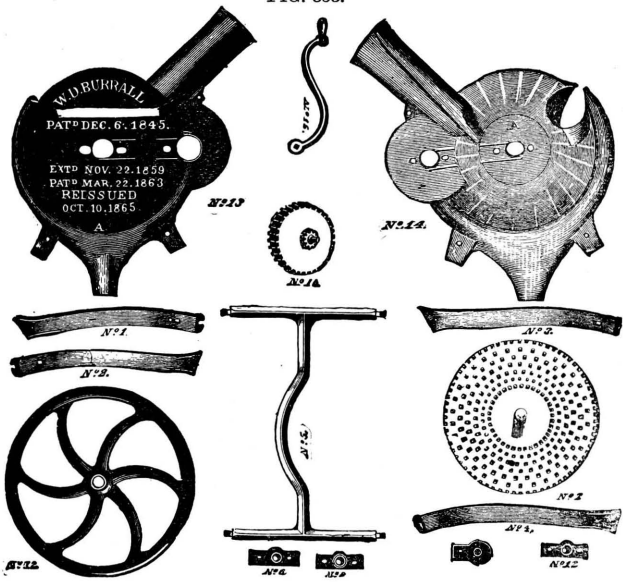


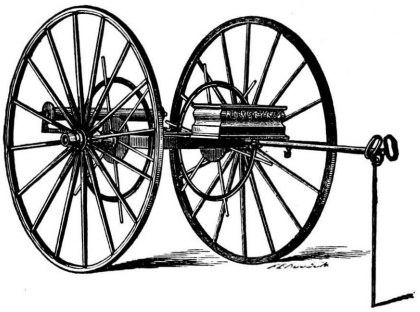
FIG. 353—Sizes and Prices.

No. 1, Leg,	$ .35	No. 11, F. W. Box, round side,	$ .15
No. 2, Leg,	.35	No. 12, Balance Wheel,	1.75
No. 3, Leg,	.35	No. 13, Flat side,	2.00
No. 4, Leg,	.35	No. 14, Round side,	2.00
No. 5, Cross-bar,	.60	No. 15, Handle,	.40
No. 6, S. W. Box, flat side,	.15	Wrench,	.15
No. 7, Shell Wheel,	1.75	Spring,	.65
No. 8, S. W. Box, round side,	.15	Gear Cap,	.50
No. 9, F. W. Box, flat side,	.15	Crank Gear,	.25
No. 10, Feed Wheel,	.70	Shell-Wheel Gear,	.25

As Burrall's Corn Shellers have been in use for so many years, parties ordering repairs should be particular to mention how long the sheller has been used; also, by whom made, date of patent, etc.

Factory Hose Reel.

FIG. 395.



This represents our most popular style of hose cart. It is constructed upon an entirely original principle, from the best material, and is designed especially for village fire departments, plantations, lumber yards, planing mills, factories, etc.

No. 1 will carry 300 feet 2½-inch cotton rubber-lined mill hose, 400 feet 2-inch cotton rubber-lined hose, 800 feet 2-inch linen hose, 1200 feet 1½-inch linen hose. It is strong, symmetrical and handsomely painted. Weight, about 130 pounds. Wheels, four feet diameter.

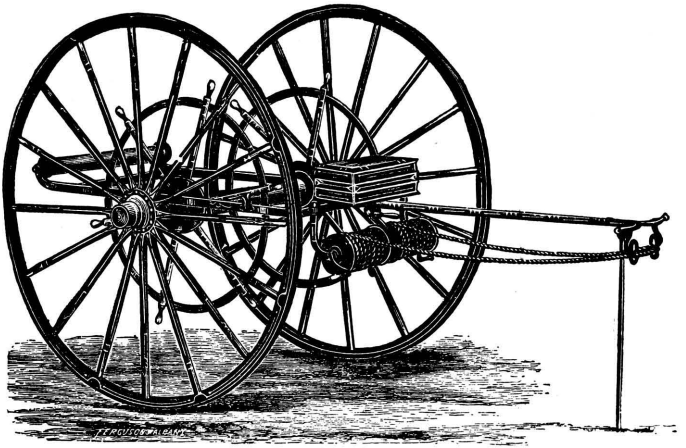
No. 2 will carry 450 feet 2½-inch rubber hose, 1500 feet 2-inch rubber hose, 600 feet 2-inch cotton rubber-lined hose, 1000 feet 1½-inch cotton rubber-lined hose. Wheels, five feet diameter,

FIG. 395—Sizes and Prices.

No. 1.	(Magnet), ...	$40.00
No. 4.	(Magpie), ...	80.00

Balanced Hose Carts.

FIG. 356.



This cart is so balanced that there is no weight on the tongue, making it easily handled with a heavy weight of wet hose. It is furnished with handles on end of reel spokes for reeling. With each cart goes drag-rope, reel, axe, crowbar, and tool box. It is strong, symmetrical, and substantial throughout, painted with handsome designs, and unsurpassed for service.

FIG. 356—Sizes and Prices.

No. 1, 5½-feet "A" Wheels (Maiden), ... $150.00

Will Carry Hose in Quantity as Follows:

| | | |

Garden Force Pump.

Mounted on Wooden Barrow.

FIG. 325.

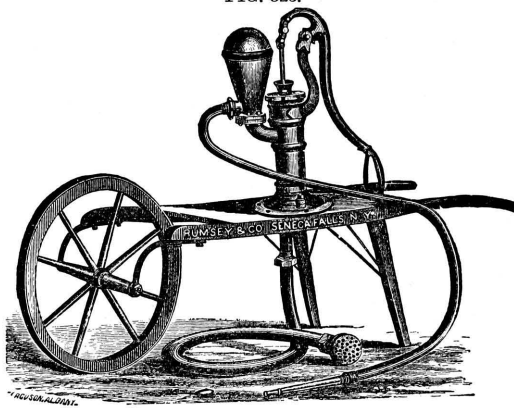


Fig. 325 shows our Wheelbarrow Force Pump. The many convenient uses to which this can be applied will be readily suggested by the appearance of the cut. The arrangement includes one of our most efficient hand force pumps, mounted on a barrow at once strong and light, with iron-bound wheel, and all necessary appliances of hose, etc., for immediate and successful operation in pumping from cisterns, wells, vats, tubs, etc., for irrigation, washing windows, sprinkling trees, etc., while its ready transportation and easy and powerful action well adapt it for extinguishing fires that have gained considerable headway.

FIG. 325—Sizes and Prices.

No.	Diameter Cylinder. Inches.	Stroke. Inches.	Suction Hose. Inches.	Discharge Hose. Inches.	IRON.		BRASS CYLINDER.	
					Cipher.	Price.	Cipher.	Price.
1	2½	6	1¼	1	Manager	$29.50	Mandrel	$34.50
2	3	6	1½	1	Mandrake	33.00	Maniac	38.00

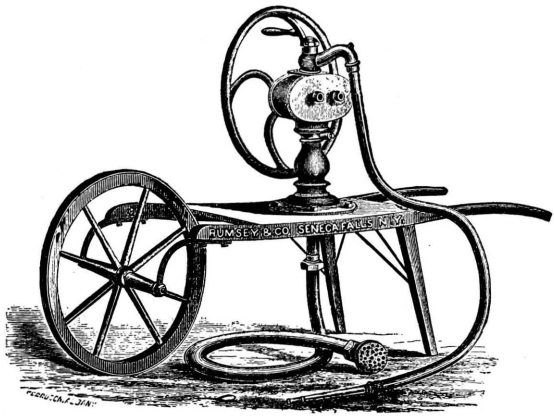
The above prices include six feet of suction and three feet of discharge hose, suction strainer, hose coupling, and our "Lilly" nozzle.

We can ship without either suction or discharge hose, or both, as wanted, at proportionate reduction in price, and can also furnish another quality of suction hose which would materially lessen the price.

Rotary Garden Pump.

Mounted on Wooden Barrow.

FIG. 326.



This cut represents one of our unrivalled Rotary Force Pumps, mounted on a hard wood wheelbarrow. It is a most valuable and convenient arrangement, and readily applicable to the many uses where a portable pump is required. The barrow is similar in construction to the one shown on preceding page, and the entire apparatus equally effective in all the purposes mentioned under that figure. The simplicity, ease of operation, and power of the Rotary Pump render it a superb machine for throwing water over a wide area, and of great utility for fire protection, etc. See page 122 for description of this pump.

FIG. 326—Sizes and Prices.

No.	Suction Hose. Inches.	Discharge Hose. Inches.	Capacity per Revolution. Gallons.	IRON PUMP.		BRONZE PUMP.	
				Cipher.	Price.	Cipher.	Price.
1	1¼	1	1–6	Manse	$29.50	Maple	$51.50
2	1½	1	1–5	Mansion	32.50	Marigold	56.50
3	2	1½	1–3	Mantle	36.50	Mariner	61.50

Prices include six feet of suction hose and three feet of discharge hose, suction strainer, hose couplings, and "Lilly" nozzle.

Garden or Fire Engine.

Side Suction.

FIG. 241.

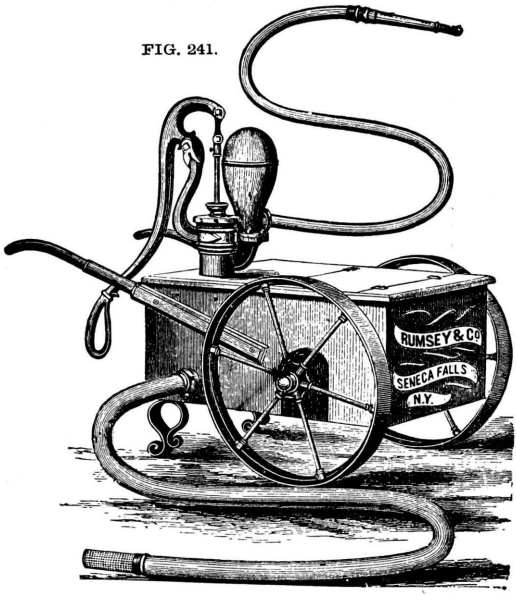


Fig. 241 shows our improved garden or fire engine, which for capacity, convenience, and utility, cannot be surpassed. The box holds about a barrel of water. It throws a strong and steady stream to the height of sixty feet, and can be easily wheeled from place to place and operated by one man. It is also arranged with suction hose to draw from cistern or well, giving practically an unlimited water supply in case of fire, while unexcelled by any apparatus for nurserymen, or for watering gardens, washing windows, etc. With our new "Lilly Sprayer," it is a superb article for laying dust, or sprinkling trees and plants with liquid compositions to destroy insects, worms, etc. Being light and compact, it is very convenient on board vessels for wetting sails, washing decks, and for fire protection.

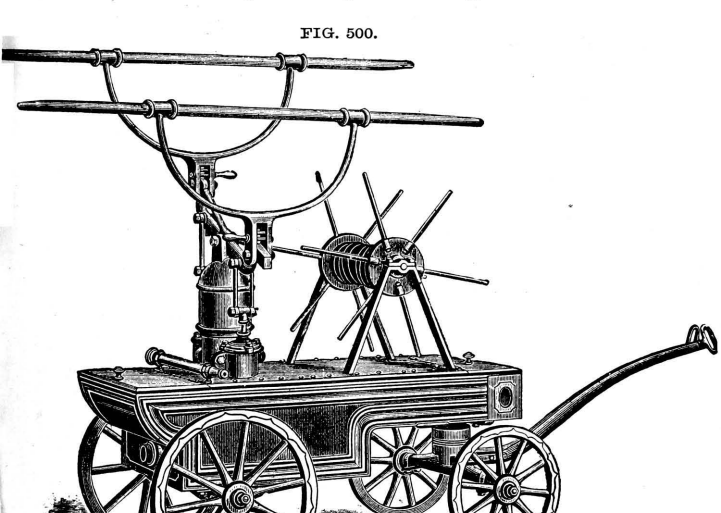
FIG. 241—Sizes and Prices.

No. 1, medium size, wood handles, capacity box 27 gallons (Marline), . .	$25.00
No. 2, extra large, capacity box 33 gallons (Marquis), ...	40.00
Fitted for suction hose, extra list	3.00

Above prices include three feet of leading hose, with brass discharge pipe and "Lilly" spraying nozzel (Fig. 385).

New Style Village Fire Engine.

FIG. 500.



This is a powerful, capacious and handsome engine, with strong running gear, and rigged throughout for prompt and good service. The brakes are iron, with hard wood levers, and fold so that the machine will traverse a narrow passage. Will turn in its own length. It draws from box and is arranged for suction hose to draft from well or cistern. Has vacuum-chamber on suction valves. Fitted with plugs to draw off water in cold weather. Hose reel attached. Wheels 18 and 24 inches diameter. Brakes have room for six or eight men, and two men will do effective work. Capacity of box 36 gallons. Throws from 60 to 75 feet high. With each machine we send leading hose, brass discharge pipe, and ½ and ⅝-inch nozzels. Suction and extra leading hose furnished at lowest market price.

FIG. 500—Sizes and Prices.

Four-inch Cylinder, suited for 1¼-inch discharge hose and 2-inch suction hose.

Brass Cylinders (Melon), ... $180.00

Fire Apparatus.

WE manufacture large lines of HOSE CARTS, HOSE CARRIAGES and HOSE WAGONS, HOOK AND LADDER TRUCKS and FIRE ENGINES, also SUPERIOR LADDERS and FIRE DEPARTMENT SUPPLIES. A new Catalogue now in preparation.

We solicit correspondence with Chiefs of Fire Departments, Fire Committees, etc., of Cities and Towns of the United States.

RUMSEY & CO., Limited,

SENECA FALLS, N. Y.

Branch Offices:

35 Dey Street, 357 Canal Street, } New York City.

Springfield, Mass.

86 Water Street, 2, 4, 6 Market Street, } Pittsburgh, Pa.

Section Views of Cistern and Pitcher Pumps.

FIG. 254.

FIG. 255.

Cistern Pump.

Fig. 254 — A, Lever.
" B, Fulcrum.
" C, Plunger.
" D, Cylinder.
" E, Lower Valve.
" F, Brass Tube.
" G, Base.

Pitcher Pump.

Fig. 255 — A, Lever.
" B, Plunger.
" C, Fulcrum.
" D, Cylinder.
" E, Lower Valve.
" F, Base.

Fig. 254 represents a Cistern Pump, with its various parts shown separately. The part shown as letter D is known as cylinder in Cistern Pumps, but as stock or barrel in Well Pumps.

Fig. 255 represents a Pitcher Spout Pump, with its various parts shown separately.

Be sure and mention figure and letter when ordering repairs.

For complete list of repairs, see next page.

Pump Repairs.

In the following lists will be found prices of pieces for all the leading pumps we make, which dealers will find of decided convenience. In this connection we desire to impress most emphatically on the minds of dealers that our threads are cut to exact and accurate gauges; all holes in flanges, etc., drilled to templets; all castings made from exact metal patterns; similar parts being always the same. Therefore, repairs will invariably take the place of the broken parts.

Levers or Handles.

Cistern pumps, Figs. 101 and 102.
- Nos. 0, 1 and 2 ..... $ .50
- No. 3 ..... .60
- No. 4 ..... .70
- No. 5 ..... 1.00
- No. 6 ..... 1.25
- No. 7 ..... 1.50

Pitcher pumps, Figs. 99 and 99½.
- Nos. 1, 2 and 3 ..... .50
- Nos. 4 and 5 ..... .75

Anti-freezing well Pumps, Fig. 509.
- No. 3 ..... .75
- Nos. 4, 5 and 31 ..... .85

Anti-freezing force pumps, Figs. 114½ and 364 ..... 1.50

Engine well force pumps, Figs. 115 and 118.
- Nos. 6½ and 7½ $1.50
- No. 8½ 2.00

Yard Well pump standard, Fig. 120 ..... 2.00

Fig. 122 ..... 2.50

Figs. 299 and 308 ..... 1.75

Iron and brass house force pumps, Figs. 142, 290, 291 and 145 ..... 2.00

Hand force pumps, Figs. 130, 132, 133, 136 and 138, with 2½ and 3-in. Cylinders 1.00

With 4-in. Cylinders 1.50

Wind-mill pumps, Figs. 68, 281, 506 and 507—6-inch stroke 1.50

10-inch stroke 1.75

Hand boiler pumps, Figs. 161 and 295 ..... 1.00

Fulcrums or Bearer Tops.

Cistern pumps, Figs. 101 and 102.
- Nos. 0, 1 and 2 ..... $ .70
- No. 3 ..... .75
- No. 4 ..... .80
- No. 5 ..... .90
- No. 6 ..... 1.10
- No. 7 ..... 1.50

Pitcher pumps, Fig. 99.
- Nos. 1 and 2 ..... .40
- Nos. 3 and 4 ..... .50
- No. 5 ..... .60

Pitcher pumps, Fig. 99½.
- Nos. 1 and 2 ..... .60
- Nos. 3 and 4 ..... .80
- No. 5 ..... 1.00

Anti-freezing well pumps, Fig. 508.
- Nos. 3 and 4 ..... .80
- No. 5 ..... .90

Anti-freezing tight top well pumps, Fig. 509.
- Nos. 3 and 4 ..... 1.25
- No. 5 ..... 1.50

Drive well pumps, Fig. 106½ 1.00

Yard well pumps, Fig. 120 ..... $2.00

Anti-freezing force pumps, Fig. 114½ 1.25

Engine well pumps, Figs. 115 and 118.
- Nos. 6½ and 7½ 1.25
- No. 8½ 1.50

Deep well pumps, Fig. 122 ..... 2.25

Iron and brass house force pumps, Figs. 142, 145, 290 and 291 ..... 1.50

Hand force pumps, Figs. 130, 132, 133, 135, 136 and 138, with 2½ and 3-inch cylinders 1.00

With 4-inch cylinders 1.50

Hand boiler pumps, Figs. 161 and 295. 1.00

Wind-mill pumps, Figs. 41, 506, 507.
- 6-inch stroke 1.50
- 10-inch stroke 2.00

Figs. 68, 281 and 286.
- 6-inch stroke 2.00
- 10-inch stroke 2.50

Swing fulcrums or bearer links, wind-mill, lift and force pumps.
- 6-inch inch stroke ..... .50
- 10-inch stroke ..... .75

Plungers with Rods.

Cistern pumps, Figs. 101 and 102.
- No. 0 ..... $ .70
- No. 1 ..... .75
- No. 2 ..... .80
- No. 3 ..... .90
- No. 4 ..... 1.00
- No. 5 ..... 1.15
- No. 6 ..... 1.30
- No. 7 ..... $1.50

Pitcher pumps, Figs. 99 and 99½.
- No. 1 ..... .75
- No. 2 ..... .80
- No. 3 ..... .90
- Ns. 4 ..... 1.00
- No. 5 ..... 1.25

Plungers only, with Valve and Packing, no Rods.

IRON	2 inch.	2¼ inch.	2½ inch.	2¾ inch.	3 inch.	3¼ inch.	3½ inch.	4 inch.	4½ inch.	5 inch.	6 inch.
Figs. 130 to 139, inclusive,	$1.00	$.....	$1.10	$.....	$1.20	$.....	$.....	$1.30	$.....	$.....	$.....
Figs. 281, 365 and 366.....	1.00	.....	1.10	.....	1.20	.....	.....	1.30	.....	.....	.....
Figs. 161 and 295.....	1.50	.....	1.75	.....	.....	.....	.....	.....	.....	.....	.....
Figs. 390 and 142.....	1.00	.....	1.10	.....	1.20	.....	.....	.....	.....	.....	.....
Figs. 123 and 259.....	1.00	1.00	1.10	1.10	1.15	1.20	1.25	1.30	1.90	3.00	
Fig. 369.....	1.75	2.00	2.10	2.20	2.30	2.45	2.90	3.20	3.50	4.00	
Figs. 124 and 125.....	2.10	2.30	2.40	2.60	2.90	3.10	3.30	3.70	4.00	4.70	
Fig. 261, each.....	.....	.....	2.40	.....	2.90	.....	.....	3.70	.....	4.70	5.25
BRASS.											
Figs. 130 to 139, inclusive,	2.00	.....	2.20	.....	2.40	.....	.....	3.00	.....	.....	.....
Figs. 281, 365 and 366.....	2.00	.....	2.20	.....	2.40	.....	.....	3.00	.....	.....	.....
Figs. 390 and 142.....	2.00	.....	2.20	.....	2.40	.....	.....	3.00	.....	.....	.....
Figs. 101 and 102.....	2.00	2.10	2.20	2.30	2.40	2.70	2.80	3.60	.....	.....	.....
Figs. 99 and 99½.....	.....	.....	2.20	.....	2.40	.....	2.80	3.60	4.00	.....	.....
Fig. 261, each.....	.....	.....	2.20	.....	2.40	.....	.....	3.60	.....	5.50	7.00

Cylinders Only.

Cistern pumps, Figs. 101 and 102.
- Nos. 0 and 1..... $1.25
- No. 2..... 1.50
- No. 3..... 1.75
- No. 4..... 2.00
- No. 5..... 2.25
- No. 6..... 2.50
- No. 7..... 3.00

Pitcher pumps, Figs. 99, 99½ and 100.
- No. 1..... 1.50
- No. 2..... 1.75
- No. 3..... 2.00
- No. 4..... 2.25
- No. 5..... 2.50

Iron hand force pumps, Figs. 130, 132, 133, 135, 136, 138, 281, 161 and 295.
- 2-inch..... 3.00
- 2½ and 3-inch..... $ 4.00
- 4-inch..... 6.50

Iron house force pumps, Figs. 142, 290, 365 and 366.
- 2-inch..... 3.50
- 2½-inch..... 4.00
- 3-inch..... 4.50

Iron house force pumps, double-acting, Figs. 145, 157, 278 and 291.
- 2-inch..... 4.00
- 2½-inch..... 5.50
- 3-inch..... 6.50
- 3½-inch..... 8.00
- 4-inch..... 11.00
- 4½-inch..... 14.00
- 5-inch..... 18.00
- 6-inch..... 25.00

Bases.

Cistern pumps, Fig. 101.
- Nos. 0, 1 and 2..... $ .75
- No. 3..... .85
- Nos. 4 and 5..... 1.00
- No. 6..... 1.25
- No. 7..... 1.50

Pitcher pumps, Figs. 99 and 99½.
- No. 1..... 1.00
- No. 2..... 1.10
- No. 3..... $1.25
- No. 4..... 1.50
- No. 5..... 1.75

Hand force pumps Figs. 130, 132, 133, 281 and 295.
- 2 and 2½-inch cylinders..... 1.00
- 3-inch cylinders..... 1.25
- 4-inch cylinders..... 1.50

Bottom Attachments for Valve Seats.

Cistern pumps, Fig. 102.
- Nos. 0, 1, 2, 3 and 4..... $ .50
- Nos. 5 and 6..... .75

Hand force pumps, Figs. 130, 138 and 135.
- 2½ and 3-inch cylinders..... .50
- 4-inch cylinder..... 1.00

Iron house force pumps, Figs. 142 and 290.
- 2, 2½ and 3-inch cylinders..... 1.00

Iron wind-mill force pumps, Figs. 365 and 366—2, 2½ and 3-in. cyl.... $1.00

Iron house force pumps, double-acting, Figs. 145, 29 278 and 157.
- 2, 2½ and 3-inch..... 1.50
- 3½-inch..... 1.75
- 4-inch..... 2.25
- 4½-inch..... 2.75
- 5-inch..... 3.25
- 6-inch..... 4.75

Lower Valves.

- Cistern pumps..... $ .25
- Pitcher pumps..... .35
- Anti-freezing well pumps..... .25
- Yard well and set length force pumps. $ .30
- Iron and brass hand force pumps..... .25
- Deep well pumps..... .35

Brass Valve Seats.

Cistern pumps, Figs. 101 and 102.	
Nos. 0, 1, 2, 3 and 4	$ .75
No. 5	1.00
No. 6	1.25
No. 7	1.50
Pitcher pumps, Figs. 99 and 99½.	
No. 1	.75
No. 2	.90
No. 3	$1.10
No. 4	1.20
No. 5	1.30
House and hand force pumps.	
2 and 2½-inch	1.00
3-inch	1.25
4-inch	1.50

Rumsey's Celebrated Iron Cylinders.

Diameter SHELL OR BODY.	2 inch.	2¼ inch.	2½ inch.	2¾ inch.	3 inch.	3¼ inch.	3½ inch.	4 inch.	4½ inch.	5 inch.
Fig. 123 and 259, 9 in. long	$1.50	$1.50	$1.60	$1.80	$2.00	$2.25	$2.50	$3.25	$4.00	$.....
Fig. 123 and 259, 10 in. long	1.90	1.90	2.00	2.25	2.45	2.75	3.00	3.75	4.50	.....
Fig. 124, 125, 369, 12 in. long	2.25	2.30	2.45	2.45	2.75	.....	3.25	3.80	4.10	4.50
Fig. 124, 125, 369, 14 in. long	2.50	2.50	2.70	2.70	3.00	.....	3.55	4.10	4.40	5.00
Fig. 124, 125, 369, 16 in. long	2.65	2.80	3.05	3.20	3.45	3.80	4.05	4.40	4.80	.....
Fig. 124, 125, 369, 18 in. long	2.90	3.00	3.35	3.75	4.00	.....	4.60	4.90	.....	.....
BOTTOM ATTACHMENTS OR CAPS.										
Figs. 123, 124, 259, 369, 258	1.00	1.00	1.00	1.00	1.00	1.25	1.25	1.25	1.25	1.25
Fig. 125, fitted inside with valve,	1.00	1.00	1.25	1.25	1.25	1.50	1.50	1.50	1.50	1.50
TOP ATTACHMENTS OR CAPS.										
Figs. 123, 124, 259, 369	.75	.75	.75	.75	.75	1.00	1.00	1.00	1.00	1.25
Fig. 125, fitted inside	1.00	1.00	1.00	1.00	1.00	1.25	1.25	1.25	1.25	1.50
PLUNGERS ONLY. NO RODS.										
Figs. 123 and 259	.70	.70	.75	.80	.90	1.00	1.10	1.25	1.45	1.70
Fig. 369 (shallow well)	2.00	2.00	2.10	2.10	2.30	2.45	2.70	3.20	3.75	4.60
Figs. 124 and 125 (deep well)	2.30	2.30	2.45	2.70	2.95	3.20	3.45	3.95	4.55	5.20
Cage one-half Plunger list.										
Plunger poppet valves, iron	.12	.14	.16	.20	.25	.30	.35	.45	.60	.75
Plunger poppet valves, brass	.17	.19	.21	.25	.30	.40	.45	.60	.75	1.00
Cylinder ring packing	.07	.09	.09	.09	.10	.10	.11	.12	.13	.15
Plunger leathers, not crimped	.10	.11	.11	.12	.13	.13	.14	.15	.17	.20
Plunger leathers, crimped	.25	.26	.26	.27	.28	.28	.29	.35	.40	.45
Lower valve leathers	.15	.16	.16	.17	.17	.18	.20	.22	.25	.30
Valve weights and screws	.15	.15	.15	.15	.15	.15	.15	.20	.20	.25
Lower valves complete	.25	.26	.26	.27	.28	.28	.29	.35	.40	.45

Stocks or Standards only.

Anti-freezing well pumps, Figs. 508, 509.	
No. 3	$3.40
No. 4	3.60
No. 5	3.75
Fig. 106½	3.75
Anti-freezing force pump, Figs. 114½ and 364	6.00
Yard well pump, Fig. 120	6.50
Deep well pumps, Figs. 299 and 308.	
Top Section	3.00
Bottom Section	4.00
Engine well pumps, Figs. 115, 118, 273.	
No. 6½	6.00
No. 7½	$6.50
No. 8½	7.50
Wind-mill pumps, Figs. 506 and 507.	
No. 3	3.40
No. 4	3.60
No. 5	3.75
Wind-mill force pump, Fig. 68.	
No 6½	6.00
No. 7½	6 50
No. 8½	7.50
Fig. 286	6.00
Fig. 41 — No. 2	5.50
Fig. 41 — No. 3	6.00

Caps and Stuffing-Glands.

	Caps.	Glands.
Figs. 114½, 299 and 308	$1.25	$ .65
Figs. 130 to 139, inclusive, 161 and 295	.75	.60
4-inch cylinders of above	1.00	.65
Figs. 365, 366, 142, 145, 290, 291 278 and 57, up to 3-inch	.75	.60
Figs. 278 and 157, 3¼-inch, inch and ½-inch	1.00	.75
Figs. 115, 118, 68, 286, N . 6½ 7½	.75	.60
Figs. 115, 118, 68 and 273, No. 8	1.00	.75
Fig. 261, 2¾-inch and 3-inch cylinders	1.00	.75
Fig. 261, 4-inch	1.25	.75

Caps and Stuffing Glands—Continued.

	Caps.	Glands.
Fig. 261, 5-inch	$1.50	$1.00
Fig. 261, 6-inch	2.00	1.00
ALL BRASS.		
Figs. 365, 366, 142, 290, 291 to 3-inch, cap and gland		3.25
Figs. 365, 366, 142, 290, 291, 3-inch to 4-inch, cap and gland		4.50

Brass Bowls.

House force pumps, Figs. 142, 145, 290 and 291 ..... $1.25

Air-Chambers.

Deep well force pumps, Fig. 308 ..... $3.00	157, 278 and 291.
Figs. 115, 118, 68 and 273.	2, 2½, 3 and 3½-inch cylinders.. $2.00
Nos. 6¼ and 7½ 2.50	4 and 4½-inch cylinders.. ..... 3.50
No. 8½. 3.00	5 and 6-inch cylinders..... 5.00
Iron hand force pumps, Figs. 366, 132,	"Excelsior" force pumps.
133, 138, 142, 303, 281 and 290.	3-inch cylinders..... 1.50
2, 2½ and 3-inch cylinders..... 2.00	4-inch cylinders..... 2.00
4-inch cylinders..... 2.50	5-inch cylinders..... 14.00
Double-acting force pumps, Figs. 145,	6-inch cylinders..... 15.00

Spouts.

Figs. 114½, 115, 118, 68, 364, 367, 300, 273, 286, 299, 303 and 308 ..... $ .50

Braces.

Braces, each ..... $ .50

Cross Heads, including Nuts, Set Screws, and Links.

	Cross Heads, etc.	Links.
Figs. 364, 509, 114½, 115, 118, 120, 122, 273, and all hand force pumps up to and including 3-inch	$ .50	$ .25
4-inch force pumps	.60	.30

Iron Pipe Nuts, for Cistern and Pitcher Pumps, Spout, Hose, and Air-Chamber Nuts.

For 1 and 1¼-inch ..... $ .35	For 2-inch and over ..... $ .60
For 1½-inch ..... .45	

Miscellaneous Repairs.

Turned malleable iron pins, for wind-mill pumps	$ .15
Connecting slides or wind-mill attachments	.50
Harp for house force pumps	.75
Bolt and brass nut for fulcrum of house force pumps	.50
Bronze valves complete, for Fig. 157—3½, 4 and 4½-inch	6.00
5 and 6-inch	10.00
Rising mains, for Figs. 291 and 157—2, 2½ and 3-inch	2.00
3½, 4 and 4½-inch	2.25
5 and 6-inch	3.00

Lead Pipe Nuts, Cistern and Pitcher Pumps.

For 1 and 1¼-inch ..... $ .25	For 2-inch and over ..... .50
For 1½-inch ..... .35	

Brass Tubes for Iron or Lead Pipe.

For 1 and 1¼-inch pipe ..... $ .50	For 2-inch pipe 1.00
For 1½-inch ..... .75	

Piston and Connecting Rods.

	Polished Iron.	Brass Cased.
For well and hand force pumps, Figs. 114½, 115, 118, 299, 308. 509, 120, 122, 273, 130, 132, 133, 135, 136 and 138	$ .60	$1.50
For wind-mill force pumps, Figs. 41, 68, 281, 286, 365 and 366	.60	1.50
Short flat rods, such as for Figs. 41, 68, 281, 286, etc	.60	.....
Long flat rods, such as for Figs. 506 and 507	.75	.....

House force pump, Figs. 142, 290, 291 and 145, solid brass rod, $2.00.

Set Screws, Base and Lever Bolts.

For all kinds cistern and pitcher pumps, each.....$ .08

Pitmans.

House force pumps, single and double-acting, Figs. 142, 145, 290 and 291.....$1.00

Guides.

House force pumps single and double-acting, Figs. 300, 142, 290, 291, 145, 278, 157.
2, 2½ and 3-inch.....$ .75
3½, 4, 4½, 5 and 6-inch.....1.00

Guide Rods.

House force pumps, single and double-acting, Figs. 142, 290, 291, 145, 157.....$ .60

Fig. 42. Florida Force Pump.

	No. 0.	No. 1.		No. 0.	No. 1.
Base	$1.10	$1.25	Spout	$ .70	$ .75
Cylinder	3.50	4.00	Crosshead and Link	.75	.75
Bearer	1.75	2.00	Vent Plug	.15	.15
Lever	1.00	1.10	Bolts, each	.10	.10
Piston Rod	1.50	1.50	Cock	2.50	2.60
Plunger	.75	1.00	Cylinder, brass lined	4.50	5.00

Figs. 196 and 196½. Hand Rotary Force Pumps.

	No. 1.	No. 2.	No. 4.	No. 5
Case, cover, and stuffing-boxes	$8.00	$9.00	$15.00	$17.00
Cams, each	3.50	4.00	6.00	6.50
Base, including leather valve	3.00	3.00	4.00	5.50
Spout and cap	1.00	1.00	2.00	2.50
Balance wheel, for Fig. 196	1.00	1.00	1.00	.....

Extras, when Sent Separate.

	No. 1.	No. 2.	No. 4.	No. 5.
Valves, leather, each	$ .25	$ .25	$ .50	$ .50
Stuffing-boxes and tight caps, each	.35	.35	.35	.35
Brass thumb screws, each	.25	.25	.25	.25
Round head machine screws, each	.03	.03	.03	.03
Square head machine screws, each	.04	.04	.04	.04

These prices apply to extras for Fig. 197 also.

Fig. 197.

	No. 1.	No. 2.	No. 4.	No. 5.
Case, cover, stuffing-boxes and caps	$8.00	$9.00	$15.00	$17.00
Cam, with short shaft	3.50	4.00	6.00	6.50
Cam, with long shaft	5.00	5.50	7.50	8.00
Small base	1.50	1.75	.....	.....
Bed plate	4.00	4.50	7.00	8.00
Spout and cap	1.00	1.00	2.00	2.50
Pulleys, each	2.00	2.50	4.00	4.00
Outside bearing	1.00	1.25	2.00	2.50

Extras same as under Figs. 196 and 196½.

Fig. 163. Boiler-Feed Pump.

	1¼ inch.	1½ inch.	2 inch.	2½ inch.	3 inch.	4 inch.	5 inch.
Suction or discharge valves	$3.25	$3.25	$3.75	$ 4.75	$ 5.00	$ 7.50	$10.25
Cylinder	7.00	7.25	8.50	10.25	12.25	18.50	24.75
Brass plunger	5.50	6.50	8.75	10.50	14.00	22.00	35.00
Stuffing-gland	3.45	3.50	3.75	4.00	4.25	6.50	10.75

Fig. 165. Boiler-Feed Pump.

	2 x 3 inch.	2½ x 3 inch.	3 x 3 inch.	2 x 6 inch.	2½ x 6 inch.	3 x 6 inch.
Suction or discharge valves	$ 3.25	$ 4.25	$ 4.50	$.....	$.....	$.....
Suction valve	.....	.....	.....	7.50	9.00	11.00
Discharge valve	.....	.....	.....	8.50	9.75	12.75
Cylinder	6.75	7.75	8.50	8.75	10.75	12.50
Brass plunger	5.00	8.00	10.75	8.75	10.50	13.25
Stuffing-gland	3.75	4.00	4.50	3.75	4.00	4.50
Column	10.00	10.00	10.00	18.00	18.00	18.00
Pulley	8.00	8.00	8.00	10.00	10.00	10.00
Crank shaft	4.00	4.00	4.00	7.75	7.75	7.75
Outside standard	3.50	3.50	3.50	5.00	5.00	5.00

Fig. 368. Wind-Mill Force Pumps, with Three-Way Cock and Distributing Valve.

Standard complete, 6-inch stroke including rod and coupling	$ 8.00
Standard complete, 10-inch stroke, including rod and coupling	9.50
Standard only, 6-inch stroke	5 00
10-inch stroke	6.00
Set length complete, including pipe and discharge part	10.00
Platform	2.25
Platform, small plate	.25
Brace	.50
Lever, 6-inch stroke	1.50
10-inch stroke	2.00
Bearer link, 6-inch stroke	.50
10-inch stroke	.75
Spout, only	1.00
Spout wheel	$ .25
Brass spout screw	1.00
Brass spout stuffing-box	.75
Spout nut	.25
Spout hose tube	.35
Brass cased rod	1.00
Working head only	2.00
Working head cap	.40
Working head stuffing-box	.50
Suction flange (to fit working head)	.50
Brass elbow	1.00
Elbow nut	.35
Attachment to screw pipe into	.60
Disc valve, rubber faced	.50
Middle round rod, no coupling	.40
Flat rod and union coupling	.75

Fig. 287. Wind-Mill Force Pump—"Tom Thumb."

	2 inch.	2½ inch.	3 inch.	3½ inch.	4 inch.	4½ inch.	5 inch.	5½ inch.	6 inch.
Base	$2.00	$2.00	$2.00	$2.50	$2.50	$ 3.00	$ 3.00	$ 3.50	$ 3.50
Outside shell, 8-in. stroke.	4.00	4.00	4.00	5.00	5.00	6.00	6.00	7.00	7.00
Outside shell, 12-in.stroke	5.00	5.00	5.00	6.00	6.00	7.00	7.00	8.00	8.00
Brass cyl. 8-in. stroke	3.50	4.00	4.50	5.50	6.75	8.00	9.50	11.25	13.00
Brass cyl. 12-in. stroke	5.00	5.75	6.25	7.00	9.00	10.50	13.00	15.00	18.00
Bottom half air-chamber	3.00	3.00	3.50	4.00	4.50	5.00	5.50	5.50	6.00
Top half air-chamber	3.00	3.00	3.50	4.00	4.50	5.00	5.50	5.50	6.00
Stuffing-gland	1.00	1.00	1.00	1.50	1.50	2.00	2.00	2.50	2.50
Brass plunger	2.50	2.50	2.50	3.50	3.50	4.00	4.50	5.00	6.00
Brass valve seat	1.25	1.50	1.75	2.00	2.50	3.00	4.00	5.00	6.00
Rising main	1.00	1.00	1.00	1.25	1.25	1.75	1.75	2.00	2.50
Suction flange	.60	.60	.75	.80	1.00	2.00	3.00	4.00	5.00
Brass piston rod	1.25	1.25	1.25	1.50	1.50	2.00	2.00	2.50	2.50
Wind mill connection	.50	.50	.50	.50	.60	.60	.75	.75	.80
Check valve	.30	.30	.30	.40	.40	.50	.50	.60	.60
Bolts, each	.10	.10	.10	.10	.10	.15	.15	.15	.15

Fig. 370. Cataract Bilge Pump.

	No. 1.	No. 2.
Copper lined cylinder	$16.00	$18.00
Plunger	4.00	5.00
Lever socket	2.00	2.50
Wrought-iron lever	3.00	3.50
King pin with handle	1.00	1.50
Plunger bolt	.75	1.00
Plunger packing	$ .40	$ .50
Plunger valve	1.00	1.50
Lower valve	1.00	1.50
Lower valve packing	.40	.50
Plunger valve packing	.40	.50
Copper lining for cylinder	3.00	4.00

Fig. 262 and 263. Bilge Pumps.

SIZE.	5 inch.	5½ inch.	6 inch.	8 inch.
Bed plate	$ 8.75	$ 9.00	$ 9.50	$15.00
Cylinder	6.00	7.00	8.00	10.00
Cylinder, copper lined	11.00	12.00	14.00	18.00
Beam	4.00	5.00	5.50	7.00

Fig. 262 and 263. Bilge Pumps—Continued.

SIZE.	5 inch.	5½ inch.	6 inch.	8 inch.
Spout and water box	$8.75	$9.50	$10.00	$13.00
Vacuum-chamber	2.00	2.00	2.50	4.00
Plunger	5.50	6.50	6.75	8.00
Lower valve	4.00	4.50	5.00	7.50
Lower valve tube	2.00	2.50	3.00	4.00
Shackles, per pair	1.25	1.25	1.25	2.00
Shackel bolts, each	.30	.30	.40	.50
King pin	.75	.75	.75	1.00
Elbow	3.00	3.50	4.00	6.75
Wrench	.50	.50	.50	.75
Sounding plug	.30	.30	.30	.30
Suction flange	1.00	1.50	1.50	2.00
Plunger leather	.60	.65	.70	1.50
Thumb screw, each	.25	.25	.25	.25
Wood lever	1.00	1.00	1.00	1.50
Wrought iron levers, Fig. 263	4.00	4.00	4.00	5.00
Bolts, each	.15	.15	.15	.15

Fig. 212. For Bells.

	No. 1-0.	No. 2-0.	No. 3-0.	No. 4-0.	No. 5-0.	No. 6-0.	No. 7-0.
Bell, only	$3.00	$4.00	$5.00	$6.50	$8.50	$11.00	$13.00
Yoke	.80	1.00	1.15	1.20	1.25	2.25	2.50
Standard	1.25	1.50	2.00	2.15	2.25	3.00	3.50
Clapper	.50	.50	.75	.75	.75	1.00	1.00
Crank	.10	.15	.15	.20	.20	.25	.25

Fig. 210.

	No. 6.	No. 6½.	No. 7.	No. 8.
Bell, only	$14.00	$28.00	$35.00	$45.00
Standard, each	1.50	2.00	2.50	5.00
Yoke	3.00	4.00	5.00	7.50
Wheel	2.00	2.50	2.75	4.75
Wood frame, only	3.00	3.50	3.50	5.00
Clapper	1.00	1.25	1.50	2.25
Jaw, with flange	.....	.....	.....	1.20
Jaw, with no flange	.....	.....	.....	1.00
Sheave	.50	.50	.50	.50

Figs. 540 and 541. "Eagle" Hydrants and Street Washers.

	¾-inch.
Brass screw, only	$ .75
Brass valve case, nut and tube	3.05
Brass valve case, only	1.75
Brass plunger valve only, with packing	1.00
Bottom part of plunger valve	.75
Plunger valve packing	.25
Brass nut for plunger valve	.20
Brass tube for iron or lead pipe	.70
Brass swivel nut	.60
Bottom attachment	.75
Bottom cap	.25
Stock complete for hydrant, Fig. 540	4.40
Stock, only, for hydrant, Fig. 540	3.00

	¾-inch.
Spout, only, for hydrant, Fig. 540	$ .40
Flange for spout, for hydrant, Fig. 540	.10
Wheel only, for hydrant, Fig. 540	.25
Top cap, for hydrant, Fig. 540	.50
Bolt, for top cap, for hydrant, Fig. 540	.10
Malleable elbow, for hydrant, Fig. 540	.40
Case and cover, for street washer, Fig. 541	1.50
Cover only, for street washer, Fig. 541	.40
Inside plate for street washer, Fig. 541	.25
Screws to fasten inside plate, for street washer, Fig. 541	.10
Keys, for street washer, Fig. 541	.30

Figs. 547 and 545. Favorite Yard Hydrant and Street Washer.

FIG. 547.	
Case	$1.50
Valve, only	.75
Union	.75
Stock	2.50
Spout	.40
Draw head	.75
Screw	.60
Cap	.50
Wheel	.25

FIG. 547.	
Bolts, each	$ .10
Valve, leather	.15
FIG. 545.	
Case and cover	1.50
Cover, only	.40
Inside plate	.25
Screws for plate, each	.10
Key	.30
Valve packing	.25

Fig. 551. Watch Pumps.

	No. 1.	No. 2.	No. 3.	No. 4.	No. 5.	No. 6.
Case	$1.15	$1.25	$1.60	$2.00	$2.50	$3.50
Cover	.55	.65	.80	1.00	1.50	1.75
Flange, each	.20	.25	.30	.35	.40	.40
Stuffing-gland	.25	.30	.40	.40	.50	.50
Stuffing-box nut	.20	.25	.25	.30	.30	.35
Suction valves complete	1.30	1.50	1.75	2.00	3.00	4.00
Piston valves and shaft	1.60	1.75	2.00	2.25	3.50	4.75
Handle	.40	.50	.55	.55	.75	.80
Bolts, each	.10	.10	.10	.10	.15	.15
Priming plug	.20	.20	.20	.20	.25	.25

Figs. 274 and 275. Excelsior Pumps.

	3 inch.	4 inch.	5 inch.	6 inch.
Cylinder with two valve-seats	$11.00	$11.00	$20.00	$25.00
Bed plate with two valve-seats	4.00	4.00	7.50	9.00
Air-chamber	1.50	2.00	4.00	5.00
Piston rod 274	.....	.....	6.50	7.00
Piston rod 275	1.50	1.50	3.00	4.00
Plungers with leathers	.75	1.00	2.00	2.50
Front cylinder head	1.00	1.00	2.00	3.00
Back cylinder head	.90	.90	1.75	2.50
Brass stuffing-box cap	.25	.25	.75	.75
Poppet valves, each	.50	.50	.80	1.00
Lever socket	.75	.75	1.25	1.15
Wrought-iron lever and wood handle	1.50	1.50	2.00	2.00
Fulcrum	.25	.25	.35	.35
Suction hose, half coupling	.90	1.10	1.75	2.50
Discharge hose, half coupling	.75	.90	1.10	1.75
Long or fulcrum bolt	.25	.25	.30	.40
Lever bolts	.15	.15	.20	.30
Crimped leathers, each	.30	.40	.60	.70
Brass bushings for suction and discharge	.50	.50	.75	1.00
Brass thumb screws	.25	.25	.35	.35

Fig. 652. Rumsey's "Terror."

Base	$2.00	Stuffing-box gland	$ .30
Cylinder	3.00	Lever socket	1.00
Cylinder, brass-lined	4.00	Lever	1.50
Air-chamber	2.50	Lever, T head	1.75
Suction piece	1.50	Tight nut	.25
Back cylinder cap	.60	Suction attachment and tube	.75
Front cylinder cap	.65	Discharge attachment and tube	.50
Rod	1.25	Bolts, each	.20
Plunger	.50	Draw-off plug	.20
Stuffing-box cap	.20		

Fig 208. Improved Hydraulic Ram.

	No. 2.	No. 3.	No. 4.	No. 5.	No. 6.	No. 7.	No. 8.
Impetus valve and case	$4.00	$5.00	$6.00	$10.00	$15.00	$20.00	$30.00
Impetus valve, only	2.00	2.50	3.00	5.00	7.50	10.00	15.00
Air-chamber	3.00	3.75	4.50	8.00	15.00	20.00	50.00
Base, only	3.00	3.75	4.50	7.00	13.50	18.00	50.00
Inside valves, complete	.25	.25	.38	.45	.65	1.25	3.50
Drive pipe couplings, nut and tube	.50	.50	.75	1.00	1.75	2.50	3.50
Discharge pipe couplings	.40	.40	.60	.80	1.00	1 50	2.50
Set of bolts and nuts, complete	.85	.90	.95	1.00	1.50	3.75	7.00
Packings for air-chamber	.20	.25	.30	.35	.50	.90	2.50
Packings for impetus valve	.15	.18	.20	.25	.40	.60	1.00
Set of packings, complete	.50	.55	.65	.75	1.15	1.75	4.00
Brass screws for valve case, each	.25	.25	.30	.30	.35	.....	.....

Fig. 201. Horizontal Centrifugal Pump.

	No. 2.	No. 3.	No. 4.	No. 5.	No. 6.	No. 6½.	No. 7.
Case stuffing-box side	$5.00	$9.50	$10.50	$12.00	$16.00	$18.00	$34.00
Case suction side	4.50	8.50	10.00	11.00	15.00	16.50	32.80

Fig. 201. Horizontal Centrifugal Pump—Continued.

	No. 2.	No. 3.	No. 4.	No. 5.	No. 6.	No. 6½.	No. 7.
Disc	$3.00	$ 8.00	$ 9.25	$10.50	$12.50	$14.00	$16.20
Shaft	3.50	8.25	9.50	10.50	11.00	12.00	13.00
Pulley	3.50	5.00	6.50	9.00	10.00	12.00	12.50
Frame	8.00	12.00	15.00	18.00	25.00	28.00	37.00
Flange, discharge	.80	.90	1.00	2.50	4.00	4.00	4.50
Flange, suction	.80	.90	1.00	2.50	4.00	4.00	4.50
Suction elbow	1.40	4.25	6.50	8.50	10.00	15.00	17.00
Stuffing-gland	.40	1.00	1.50	2.00	4.00	4.50	5.00
Standard and box	2.50	4.25	6.00	8.00	10.00	12.00	14.00
Thrust collar	.75	.75	1.00	2.00	3.00	3.50	4.00

Fig. 202. Vertical Centrifugal Pump.

	No. 2.	No. 3.	No. 4.	No. 5.	No. 6.	No. 6½.	No. 7.
Bottom section of case	$4.00	$8.50	$10.50	$12.00	$16.00	$20.00	$30.00
Top section of case	4.00	8.50	10.50	12.00	16.00	20.00	30.00
Disc	3.00	8.00	9.25	10.50	12.00	16.00	17.00
Shaft	3.50	7.50	9.50	10.50	12.00	16.00	17.00
Pulley	3.50	6.00	6.50	7.00	12.00	14.00	14.00
Box	1.50	3.50	4.00	4.50	7.00	7.00	8.00
Discharge elbow	2.50	5.00	6.00	6.50	10.00	14.00	16.00
Flange	.80	2.00	2.50	3.00	5.00	6.00	8.00
Thrust collar	.90	1.75	2.50	2.50	3.75	6.00	9.00
Coupling	2.00	3.00	4.00	4.00	5.00	6.50	9.00
Step	1.00	1.50	1.75	2.00	3.00	4.00	5.00

Fig. 296. Paper Maker's Fan Pump.

	No. 3.	No. 4.
Case	$15.00	$20.00
Back head	8.00	10.00
Front head	10.00	12.00
Pump bearing	10.00	15.00
Standard, each	6.00	10.00
Fan	$9.00	$15.00
Stuffing-gland	2.00	4.00
Pulleys, each	7.00	10.00
Shaft	8.00	10.00

Fig. 328. Brass Double Cylinder Force Pump.

Base	$ 2.75	Beam	$2.25
Cylinders, each	3.00	Cross-head and link, each	.80
Suction valve plate	4.00	Lever complete	2.75
Rising main	.80	Wood handle	.50
Plunger and rod complete	2.50	Bottom valve, each	.30
Plunger complete	1.50	Rising main valve	.30
Stuffing-gland	.40	Suction main	2.00
Pump head	10.00	Rising main union	2.00

Fig. 661. Rumsey's Thresher Tank Pump.

Cylinder	$6.50	Valve seat	$ .50
Front head	2.50	Piston rod	1.00
Back head	2.60	Plunger complete	2.00
Fulcrum	.60	Suction attachment and elbow	.75
Lever socket	.90	Discharge attachment and elbow	.75
Lever	.75	Stuffing-gland	.50
Valve	.30	Draw-off plug	.15
Valve cap	.50		

Fig. 309. Reciprocating Power Column Pump.

Base	$ 2.50	Crank shaft No. 2	$7.00
3-inch cylinder	6.00	Pulley	5.00
3½-inch cylinder	7.00	Air-chamber	3.50
3-inch plunger	2.00	Stuffing-gland	.80
3½-inch plunger	2.50	Discharge flange	.80
Plunger rod	1.50	Auxiliary air-chamber	3.00
Case	10.00	Spout	.50
Front head	3.50	Handles	.30
Back head	1.75	Valve	.35
Crank shaft No. 1	6.00	Bolts, each	.10

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